

UNIVERSITY OF TERAMO

FACULTY OF VETERINARY MEDICINE



EAEVE RE-VISIT
20-22 SEPTEMBER 2010
REPORT

TABLE OF CONTENTS

	Page
Introduction	2
1) Report on the category one deficiency “the unacceptable use of the same premises for anatomy and pathology/necropsy”	3
2) Report on the category one deficiency “the absence of a 24h 7 days of the week emergency service accessible to the public”	7
3) Report on the suggestions the expert team left in the 2007 report of the visit	10
I Objectives	10
II Organisation and III Finance.....	11
IV Curriculum.....	12
V Teaching, Quality and Evaluation	15
VI Facilities and Equipment	17
VII Animals and Teaching Material of Animal Origin	19
VIII Library and Learning Resources	22
IX Admission and Enrolment	23
X Academic and Support Staff	26
XI Continuing Education	28
XII Postgraduate Education.....	29
XIII Research.....	30
Annex 1 Map A.....	31
Annex 1 Map B	32
Annex 1 Map C.....	33
Annex 1 Map D.....	34
Annex 1 Map E.....	35

INTRODUCTION

The Faculty of Veterinary Medicine in Teramo was evaluated from 8 to 12 October 2007 by the following Expert Group: Prof. Gert Niebauer, Nantes, France, Chairman (clinical science); Prof. Eric Cox, Ghent, Belgium (basic sciences); Dr. Bertil Douw, Ireland (clinical sciences - practitioner); Prof. Wim Kremer, Utrecht, Netherlands (animal production); Prof. Maria Conceicao Martins, Vila Real, Portugal (food safety); Dr. Robin G. Oakley, Graefelfing, Germany (EAEVE Programme Director).

This evaluation was made following the method of evaluation adopted by the Advisory Committee on Veterinary Training (ACVT) in 2000 and being summarized in the Standard Operation Procedures manual (SOP, 2002), method based on a comparison between the requirements defined by the ACVT to ensure a high standard of veterinary education (Annex I) and the characteristics of the Faculty to be evaluated.

After this first visit, Prof Marcel Wanner, President of the EAEVE, on behalf of the Joint Education Committee of the EAEVE and FVE, informed the Faculty that 2 category one deficiencies were found, as a result of the report made by the team, and specifically (1) the unacceptable use of the same premises for anatomy and pathology/necropsy; (2) the absence of a 24h 7 days of the week emergency service accessible to the public. In view of the fact that the new Faculty building allowed to solve the first deficiency while the Faculty agreed to plan to solve the second deficiency, the Committee decided to grant the Faculty of Teramo a *provisional approval for a period of 3 years*, period within the Faculty was expected to resolve the deficiencies and to request a re-visit.

During these 3 years, the Faculty not only made efforts to solve the 2 category one deficiencies, but has also worked, where possible, to agree to the many suggestions the Expert Team gave.

In this report, so, we will first outline the solutions the Faculty has set up to solve the 2 category one deficiencies. Then, briefly, we will delineate the “responses” actually carried out to meet several suggestions the Expert Team left in the Report of the visit. This second part will be described following the scheme of the Report (i.e. Objectives; Organisation; Finance; Curriculum - General aspects, Basic subjects, Animal production, Clinical subjects, Food hygiene-; Teaching, quality and evaluation; Facilities and equipment; Animals and teaching material of animal origin; Library and learning resources; Admission and enrolment; Academic and support staff; Continuing education; Postgraduate Education; Research).

1) REPORT ON THE CATEGORY ONE DEFICIENCY “THE UNACCEPTABLE USE OF THE SAME PREMISES FOR ANATOMY AND PATHOLOGY/NECROPSY”

The lack of separation between anatomy and necropsy facilities, reported by the Expert Team in 2007 and stated as category one deficiency by the Joint Education Committee of the EAEVE and FVE, has now been solved by the building of the new hospital, which has been completed in July 2010 and which includes new, separate and complete premises for Pathology/Necropsy.

These premises are placed in the new Teaching Hospital which is located in Piano D’Accio while Anatomy will continue to use the facilities located in Molinari Building (that have been improved as for the possibilities to wash and to disinfect student hands or boots).

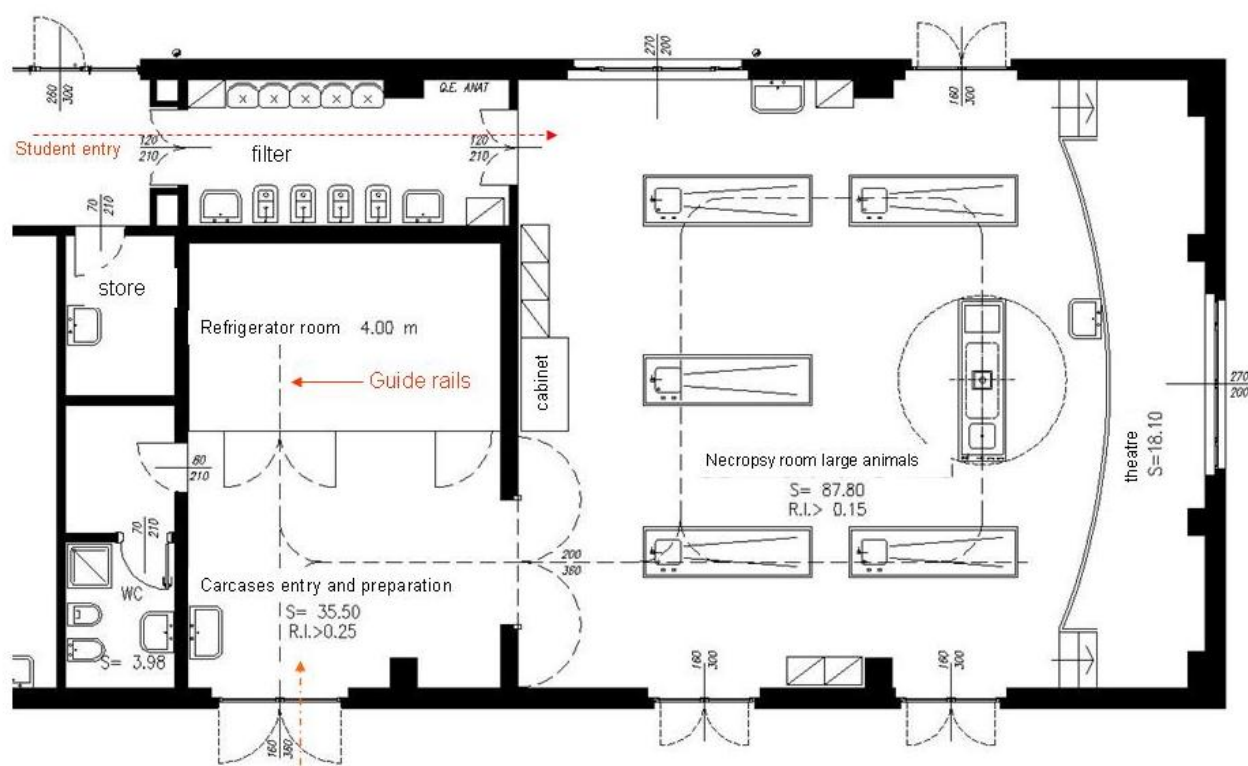
During these 3 years, not only efforts have been made to solve the problems related to these premises but also work has been done to improve the number of necropsies, bringing in more cadavers into the Faculty, and also to follow the hints done by the Expert Team to vary the species examined, even if using still temporarily the facilities described in the SER 2007.

We will then describe the new facility and biosecurity standards adopted in the new building; successively we will illustrate the results in necropsies number registered for teaching purposes.

Information on other premises and laboratories used for the completion on pathological practical work have been already illustrated in the SER 2007 and will not be described.

a) The new facility for pathology/necropsy

The necropsy facility in Piano d’Accio will allow the separation between the anatomical service (which will continue to use the facilities located in Molinari Building) and pathological services and it will be able to accommodate carcasses of large animals (horse and cattle), too. There will be a separate entrance for carcasses. In order to prevent infections, contaminated areas will be separated from clean areas. There will also be a patho-anatomical theatre for observing students if they are not directly involved in the necropsy. A special filter area has been designed for students to change and to prepare for necropsies and wash and disinfect hands or boots (see the plan). Furthermore mosquito-nets and refrigerator and freezer to hold whole carcasses of large animals will be placed.



The Department of Comparative Biomedical Sciences has written and adopted Biosecurity Standard Operating Procedures (BSOP) for all of its laboratories in general and for the necropsy and anatomy rooms (Piano d'Accio and Molinari Building) in particular. The activities are performed according to the "Guidelines on autopsy practice" of the Royal College of Pathologists, London http://www.rcpath.org/resources/pdf/main_document.pdf (Report of a working group of The Royal College of Pathologists September 2002) and the Biosecurity operational procedures of the Veterinary teaching hospital, Colorado State University (2008) http://csuvets.colostate.edu/biosecurity/biosecurity_sop.pdf

Briefly, the aims of the BSOP are to guarantee:

- high levels of hygiene and security against biological hazards to the staff involved in the necropsy rooms for didactic, diagnosis and research purposes;
- high levels of hygiene and security to the Students during the necropsies;
- high levels of hygiene and environmental security and the right preparation of the cadavers before and after the necropsy;
- qualified support to the pathologist activities during the necropsies.

All students will receive a copy of the BSOP and they will sign to know the hazards. The entry to and the exit from the necropsy facilities are subjected to specific and strict rules that every Student has to know and to follow. To enter to and to exit from the necropsy room everyone has to follow a track to avoid the cross contaminations from contaminated to clean areas (see the plan).

Concerning waste management, animal organs and carcasses are disposed of by external specialized companies: **6403 Kgs** of animal organs and carcasses were disposed of in the academic year 2009/2010. Biological waste is collected in special containers and collected by a specialist external firm. Chemical liquids and other waste material from laboratories are collected by an external firm.

b) Situation about the number of necropsies carried out during the last three years

The number of autopsies performed over the last three years, and particularly during the last academic year, has risen. This is due to:

- 1) Most of animals dying or euthanized in the clinics are subjected to necropsy;
- 2) New agreements with bovine and horse veterinarians practitioners have been drawn up to bring more cadavers into the faculty;
- 3) New agreements with the Public Veterinary Services and with swine and rabbits farms have been made;
- 4) Some necropsies have been performed in the farms with small groups of students (two or three).

Each student in the last three academic years has performed at least one large animal autopsy, one small animal autopsy and inspected various, isolated pathological organs.

All of the members of the Pathological Staff took part in each practical session and there was a ratio of 5/7 students per teacher for the isolated organs and 1:1 for the necropsies.

Students are required to sign after their practical lessons and students may only take the end of course examination if they have signed for one large animal necropsy, one small animal necropsy and different isolated organs inspection.

Concerning poultry necropsies, they are generally executed iwithin the premises of the flocks during the practical activity in the compulsory practical teaching period (tirocinio) in "Animal infectious diseases, avian pathology and prophylaxis". During this period, each student has the opportunity to execute several necropsies and inspections, from embryos of not-hatched eggs to

death animals (young and heavy chickens, hens etc.) in the farms visited, as a classical tool used in the diagnosis of poultry diseases (for this period, the students are taught by the vet responsible of the farms of the Amadori group, one of the greatest poultry industries in Italy).

In succession here, some tables useful to demonstrate the progresses made by the Faculty to improve the number of necropsies or isolated organs during the last three years.

Table 1: Number of necropsies over the past 3 years

Species		2009/2010	2008/2009	2007/2008	Average
Food-producing animals	Cattle	5	4	1	39,6
	Small ruminants	13	11	5	
	Pigs	80	-	-	
Equine		12	6	3	7
Poultry		185	105	80	162
Rabbits		87	-	30	
Companion animal/exotic	Dogs	67	37	28	83
	Cats	23	15	6	
	Others: (Pet birds, Reptiles, Foxes, Badgers, Otters, Martens, Wolves, Ferrets, Hamsters, Petaurus)	28	23	21	

Table 2: Necropsies available for clinical education (academic year 2009/2010 - main indicators new SOP)

R 18:

no. of students

graduating annually $\frac{46}{1} = \frac{110}{2.39}$

Denominator 2.39

no. necropsies food producing animals + equines

110 2.39

R 19:

no. of students

graduating annually ^{a)} $\frac{46}{1} = \frac{162}{3.52}$

Denominator 3.52

no. poultry/rabbits¹⁾

162 3.52

R 20:

no. of students

graduating annually ^{a)} $\frac{46}{1} = \frac{83}{1.80}$

Denominator 1.80

necropsies companion animals¹⁾

83 1.80

^{a)}see Annex I, 2.2.b; ¹⁾Table 7.3, average; ²⁾Table 7.4, average;

³⁾where applicable use or add information provided in chapter 7.1.8.2;

⁴⁾see 7.1.8.1

Table 3: Isolated pathological organs during 2010

2010	Liver	Lung	Heart	Uterus	Ovary	Placenta foetus	Kidney	Spleen	Urinary bladder	Stomach	Fore stomach	TOT
Cattle	7	7	7	8	14	-	8	8	9	8	8	84
Equines	11	11	11	6	12	-	22	11	11	11	-	106
Small ruminants	75	77	76	12	24	4	30	19	17	13	22	369
Swine Wild boar	113	113	113	60	120	-	92	80	90	80	-	861

Table 4: Isolated pathological organs during 2009

2009	Liver	Lung	Thymus	Heart	Uterus	Ovary	Placenta foetus	Kidney	Spleen	Urinary bladder	Stomach	Fore stomach	TOT
Cattle	13	13	2	13	6	12	-	5	10	10	2	2	88
Equines	15	15	2	15	1	2	-	8	2	-	-	-	60
Small ruminants	54	53	5	53	58	116	4	2	10	-	5	5	365
Swine Wild boar	54	254	-	54	10	61	-	8	5	-	25	-	471

Table 5: Isolated pathological organs during 2008

2008	Liver	Lung	Heart	Uterus	Ovary	Urinary bladder	TOT
Cattle	8	8	8	-	-	15	39
Equines	5	5	5	-	-	-	15
Small ruminants	33	33	33	2	104	-	205
Swine	72	72	72	-	-	-	216

Table 6: Isolated pathological organs during 2007 (first semester)

2007 (January- September)	Liver	Lung	Heart	Spleen	Foetus	Placenta	Uterus	Ovary	TOT
Cattle	4	3	3	-	-	-	-	-	10
Equines	1	1	1	-	-	-	-	-	3
Small ruminants	75	70	70	3	6	3	13	1	241
Swine	101	101	101	-	-	-	-	-	303

Table 7: Isolated pathological organs during 2007 (second semester)

2007 (October- December)	Liver	Lung	Heart	Spleen	Foetus	Placenta	Uterus	Ovary	Kidney	TOT
Cattle	19	19	19	2	-	-	-	-	-	59
Equines	1	1	1	-	-	-	-	-	-	3
Small ruminants	51	49	49	-	-	-	4	108	-	261
Swine	73	72	72	-	-	-	-	-	1	218

2) REPORT ON THE CATEGORY ONE DEFICIENCY “THE ABSENCE OF A 24H 7 DAYS OF THE WEEK EMERGENCY SERVICE ACCESSIBLE TO THE PUBLIC”

The lack of a structured 24/24 hr. emergency service available for small animal and horses reported by the Expert Team in 2007 and stated as category one deficiency by the Joint Education Committee of the EAEVE and FVE, has been solved.

The VTH gives assistance to small and large animals 24 hours/day, 365 days/year. Routine and specialist clinical activities run from Monday to Friday from 8.00 to 17.00, accepting referral cases, spontaneous cases or emergencies.

From 17.00 to 8.00 an emergency service is available runs by veterinarians and students. In case of an emergency, clients can contact the emergency service by phoning the special number +39.334.6104143 or presenting directly to the reception of the VTH.

The VTH has to be consider a referral centre for the region Abruzzo and the surrounding regions such as Marche, Molise, Lazio and north part of Puglia. The VTH gives references about Internal Medicine, Small Animal surgery, Neurology and Neurosurgery, Andrology, Obstetric, Gynaecology and Artificial insemination, Horse Surgery and medicine.

Eight veterinarians are involved in the 24h emergency service. These veterinarians, all Doctors (PhD) in Veterinary Emergency Clinic and Therapeutics, rotate weekly (one in the morning, afternoon, night and week end) (see example of rotation of four veterinarians A,B,C,D)

	Monday	Thursday	Wednesday	Thursday	Friday	Saturday	Sunday
08-14	A	A	A	A	A	D	D
14-20	B	B	B	B	B		
20-08	C	C	C	C	C		

Emergency Service Rotation

The 24h emergency service is primarily held by the eight veterinarians that together with students accept the emergency cases. A Professor/Researcher of Internal Medicine, Obstetric and Gynecology, Surgery and Neurology is available on call to perform specialist consultation/diagnostic and/or surgery in the emergency cases.

The Emergency service assists small and large animals, as referral cases by private practitioners as well as stray animals coming from the region Abruzzo referred by ASL veterinarians according to the agreement signed by our University and the regional government (Prot. N. RA/81104/11/AGP.14 21st July 2009). A financial contribute to the emergency service comes from the Abruzzo regional government.

Vets and students on duty during night and week-end take also care of any therapy and monitoring of hospitalized patients.

Student rotations are organized to contribute to the emergency service. Every student, between the end of the 4th year to the end of 5th year, has to rotate for a minimum of two to a maximum of four week from 20.00 to 8.00 including one or two week-ends. A calendar of rotation is published by the teaching tutor office every year. During rotations students are primarily involved in the clinical activity such as accepting emergency cases, performing clinical examination, clinical pathology, diagnostic imaging (radiography and ultrasound), monitoring hospitalized patients, administration of pharmacological therapy, participating to the surgical procedures and post-operative monitoring. A student to be admitted to rotation has to attend to a three days intensive course regarding the basic emergency procedures such as collecting a blood or urine sample, drug administration, function of

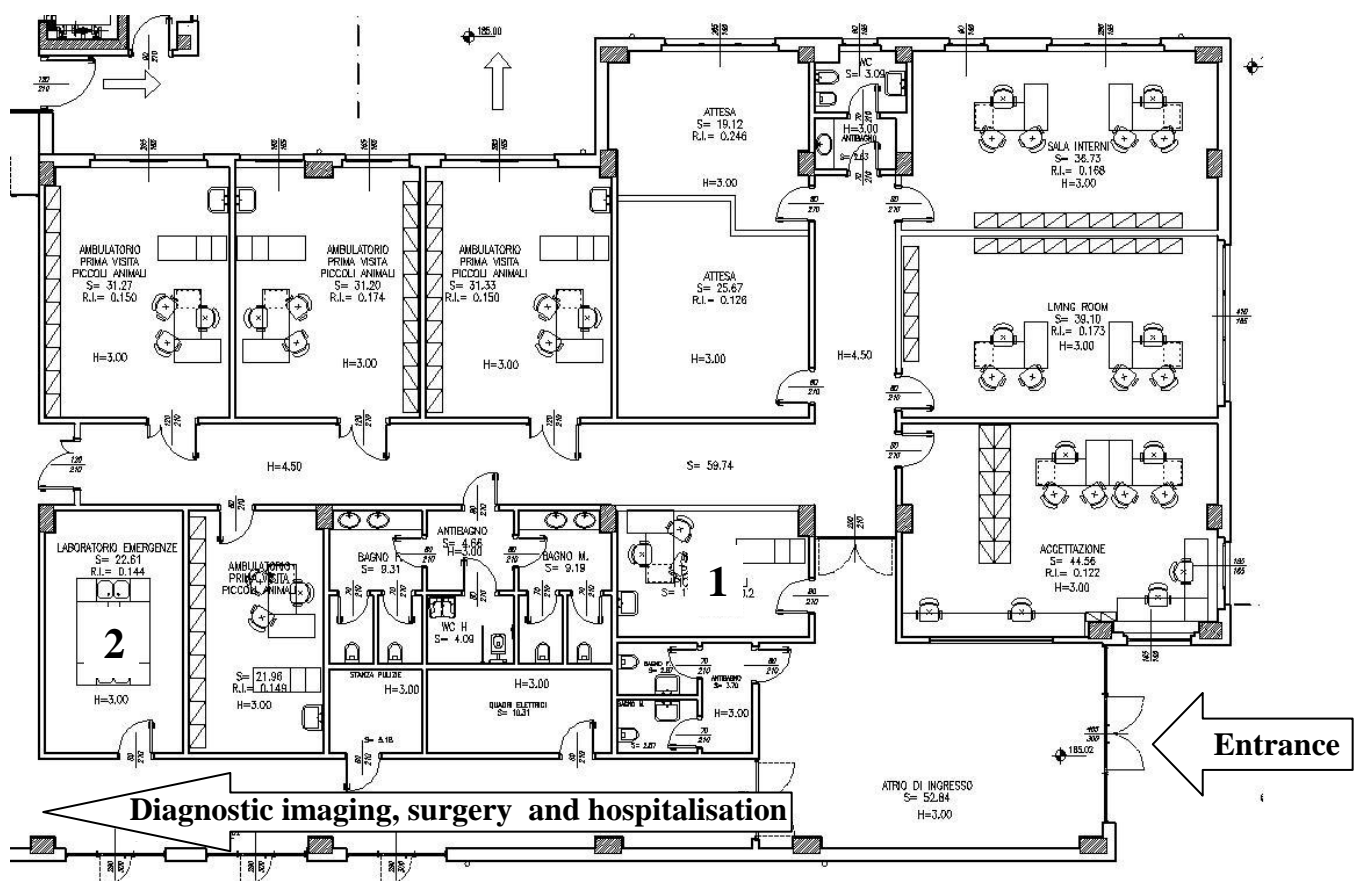
digitalized radiology, function of ultrasound, function of the equipment of emergency lab, how to monitor a patient, surgical aseptic techniques, basic of sedation, anaesthesia and pain therapy.

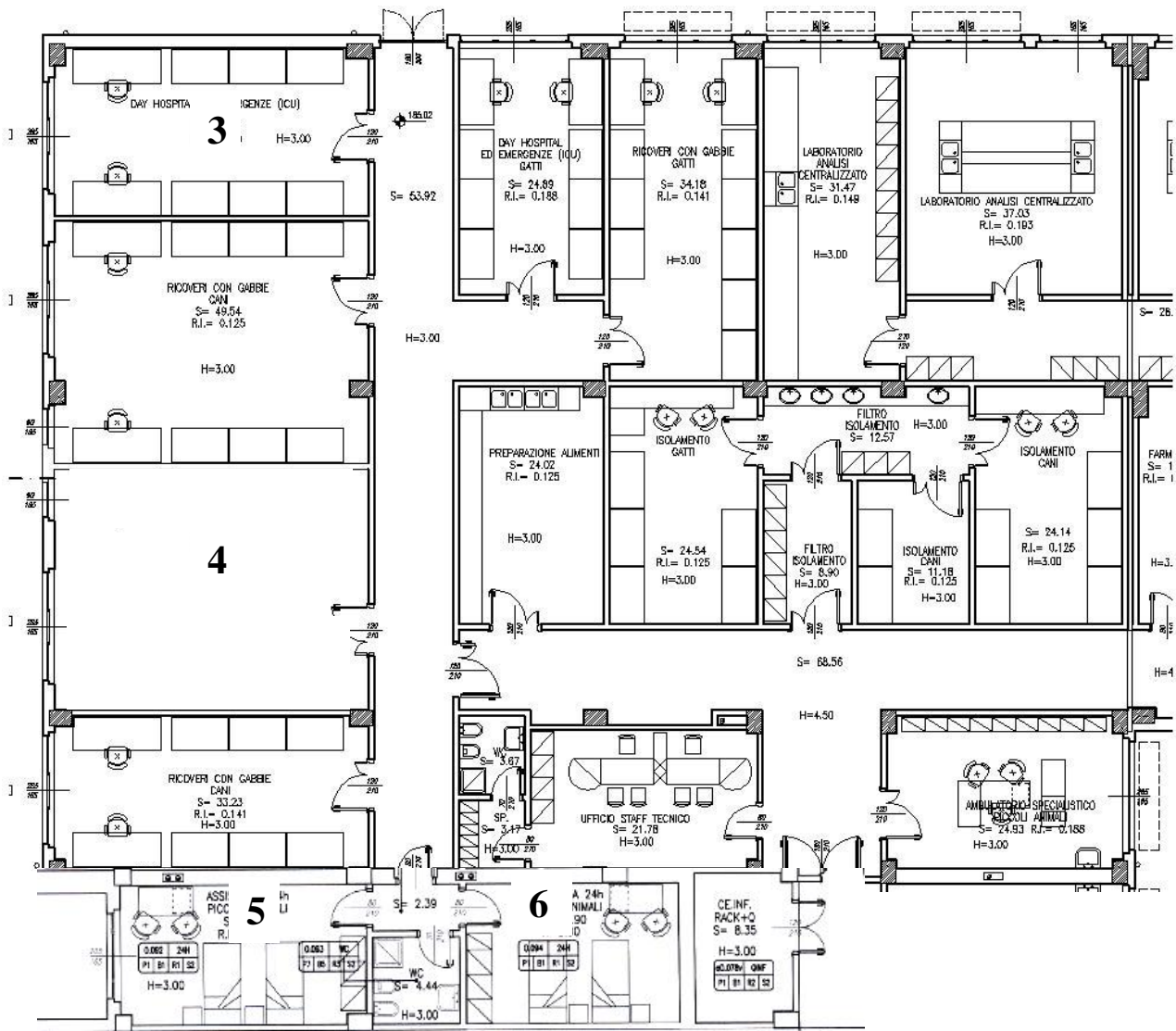
Stray SA	Private SA	LA
39	36*	21
Emergency service N° of consultation / hospitalisation from 1 st January 2010		
*please note the emergency service for private animals started the 29 th of Aprile 2010		

Facilities available for 24h emergency service:

Consultation room for emergency SA (1) Radiology, ultrasound, emergency/reanimation facilities, multiparametric monitors, electrocardiographs, blood pressure measuring doppler, oxygen supply and ICU (3,4) as well as emergency lab (2) including myrocentrifuge (HTC) refractometer, Lasercyte Idexx, Vet test Idexx, glucometers, haemogas analyser, microscope, urine analysis.

Furnished rooms including living and bedrooms are provided for both the emergency service veterinarians and students at VTH (5,6)





The aim of the VTH is to contribute to the animal health and welfare through the teaching process of new veterinarians, continuing education and specialization of veterinarians as well as the applied research concerning diagnosis, therapy and prophylaxis of the disease affecting domestic animals.

The VTH will move to Piano d'Accio where has been built the first part of the new vetschool including the Department of Veterinary Clinical Sciences, two units of the Department of Food Sciences as well as the necropsy room for small and large animals. At the beginning of 2011 Cartecchio will be completely inactivated and closed.

The new VTH in Piano d'Accio includes all the facilities located in Cartecchio with a great improvement in the laboratories of clinical pathology, virology, bacteriology, parasitology, pharmacology and toxicology, the infectious animal isolation station, the diagnostic and surgical premises for small and large animals and finally intensive care units for companion animals and horses.

3) REPORT ON THE SUGGESTIONS THE EXPERT TEAM LEFT IN THE 2007 REPORT OF THE VISIT

I – OBJECTIVES

The main objectives, as stated in the Report presented in October 2007, still remain **teaching** and **research**, the former one articulated in the following way: teaching undergraduate students – speciality schools for veterinary – contribution to continuous learning for veterinary professionals; an objective which is founding great interest and efforts in the Faculty concern the **internationalization of education and research**.

Teaching

Teaching undergraduate student is the main mission of the Faculty. The organization and objectives of the courses are undergoing a major revision according the requests put forth by the Ministry of the University and Research (MIUR). The specialty schools (described in the original SER) are organized and supervised by the Faculty. A tutor is allocated to every students for the implementation and eventual variation of the curriculum.

The Faculty organizes regularly jointly with the regional veterinary/breeder associations/stakeholders meetings/workshops with prestigious national and international speakers to bring an update to the more advanced state of art on all the topics of interest for vets. Many of these meetings are officially accredited by the Ministry of Health as “ECM” events (Educazione Continua in Medicina), essentially continuous learning in medicine, providing a unique opportunity for the newly graduated and senior veterinaries operating in the central part of Italy.

Research

Basic and applied research is carried out at the Faculty, and it is normally financially managed at Department level. Funds from the research come from several sources: basic funds are allocated by the Athenaeum to support pilot studies in all scientific areas covering Veterinary medicine. The funds are allocated on the basis of the scientific productivity of the applicant’s group, evaluated on the basis of periodic reports submitted and the global impact factor of the coordinator. A second stream of funds come from the Ministry of the University (MIUR), so called *funds for research of relevant national interest* (PRIN) and *funds for basic research*, excellence ones (FIRB). Both kind of grants are quite competitive, particular the FIRB ones, and the Faculty has successfully applied for both grants in the past and present years. The research activities are generally supervised by senior staff, and carried on by researchers, post docs, PhD students, and undergraduate students, plus some visiting scientists from collaborative projects. Driven also by a decay in the national founding, the Faculty is intensifying its efforts to compete for European Funds as well as from financial support from private companies (more in Chapter 9) through the Departments.

Internationalization of education and research – A very active Erasmus programme is running since 2005 with an average n. 32 students/year heading towards prestigious Faculties across Europe. The trend is highly positive with a increasing interest of students as well as the number of European Universities joining our programme. As for the Internalization of the Research, the Faculty is very successful in competing for national funds of specific programmes for the Internationalization of the research: the “Interlink” Programme of our Ministry of University (MIUR), as well as other prestigious, high competitive international networking programmes such as Royal Society fellowships, British Council - CRUI bilateral programmes, COST actions (Gemini, COST Action FA0702 <http://www.cost-gemini.eu> VII EU programme), Japan Society for the promotion of Science. In addition to that, most of the research groups working in the Faculty have international collaboration with other International Institutions spanning from Europe, USA, Japan, India, therefore there is mobility of the senior and young scientist working at the collaborative projects. Finally, being part of the teaching staff directly involved in the Marie Curie EU programme, an intense effort is on going to encourage PhDs/post docs to apply for Marie Curie grants for international mobility/training. This is achieved by forcing them to prepare periodic reports and

internal seminars on the scientific activity in English in order to improve their communication and managing skills.

II) ORGANISATION and III) FINANCE

Teramo's Faculty of Veterinary Medicine is part of a state-run University and as such still receives from the funds from Ministry of University for teaching and support staff, for covering operating costs and teaching activities and for overheads .

On the whole, however, there has been a substantial decrease in 2009 and 2010 (-10 %) in the entity of ordinary funds allocated by the Ministry to the University mainly related to overall financial restriction of all Italian Ministries.

A further fund reduction has been related to a reduction of the number of students admitted to the Faculty from the Academic Year 2008/09: admission to the Faculty in fact has been reduced, on a restricted number basis (i.e., *numerus clausus*), from 90 places for Italian or EU citizens and 5 places for non-EU students to 70 places for Italian or EU citizens and 5 places for non-EU students. As the Ministry's policy for the ordinary funding of the Faculties is based on criteria that are established on student income, this has implicated a further important fund reduction.

This situation, combined with investment needs for the maintenance of teaching related infrastructures and to be evaluated according to the vitality of the research structures (Departments), poses serious financial problems.

The University however has maintained an important investment using 12,000,000 Euros set aside for the building of the new Veterinary faculty. This construction started in 2008 and has been completed (July 2010) for the new teaching hospital, the new necropsy room, pharmacology and toxicology, and animal production laboratories, as well as new teaching rooms and offices for the teaching and support staff of the Department of Clinical Sciences and for Pharmacology and Toxicology and Animal Production staffs, giving more custom-built facilities which were absent in 2007.

In this context, the Faculty does not have yet its own financial Department even if a law project is actually in discussion in Italian Parliament (July 2010) to give Departments a role not only to coordinate research but also to manage teaching, with a clear choice to give faculties a financial autonomy, so far strictly related to research grants management.

The students fees have not been increased even if some request have been done in this way to the University. A fee augmentation appear difficult in the Regional context also if considered with regard to other Abruzzo's Universities (particularly L'Aquila University), where university taxes have been suspended after the 2009 earthquake.

The Faculty continues to use the general university financial facilities, receiving however, starting 2008, directly the part dedicated to laboratory taxes from the students fees. The total amounts have been:

- 40,000 Euro for academic year 2008-2009
- 60,000 Euro for academic year 2009-2010

These fees are managed directly by the Faculty council and dedicated specifically to practical work of the students. Each teacher has to present a specific demand to the Faculty Joint Committee (consisting in 4 teachers and 4 students), along with the description of the practical teaching activities to justify the sum requested. A Log Book has been specifically prepared to be filled by the student taking part in the practical in order to have a clear follow up of the results expected in terms of practical learning.

IV CURRICULUM

IV.1 General aspects

At a national level, following the University reform (22nd October 2004, n.270) which involved all the Faculties, a revision of the Curriculum was compulsory (until 2011) with the objective to fit with the new Ministry tables whose objectives were giving more national uniformity in University teaching.

Even if the revision had to fit with the Ministry indications, this gave the Faculty an opportunity to amend the curriculum following most of the 2007 Expert Team suggestions.

The revision has been done following two steps, one formal which was compulsory and had to be reported to the University National Committee, a second substantial, to make the curriculum more efficient.

The first step of this revision (*formal revision of the curriculum*) has been completed for the Vet Faculty of Teramo in June 2010, giving the Faculty the opportunity to fulfil with the several suggestions the Expert Team provided in 2007. Particularly:

- The subjects covered have been maintained according to subjects required by the SOP;
- The second year, too heavily loaded, has been reformed, including only general pathology while veterinary patho-physiology and general pathological anatomy have been brought into the 3rd year;
- General pathology will however represent a compulsory preparatory course for all the exams of the 3rd year, acting as a system in which students are forced to stop in the earlier years, when they failed to pass the two first years examinations and strongly discourage students to start the third year when they did not finished all the examinations from the 2nd year (as suggested by the Expert Team in chapter 5 of the report). This could in part contribute (together with a more efficient tutoring system and more individualized teaching efforts) to reduce the average duration of attendance which is still over 8 years.
- The number of hours per UTC has been standardized and generally reduced (8-11 hours for the basic sciences and 12 hours for the other subjects). For practical teaching however, each UTC will cover up to 20 hours of teaching, in order to allow practical training in small groups or individually.
- The teaching practice concerning clinical fields has been organised on two main areas i.e. large and small animals, allowing a more efficient organisation of teaching.
- Associated to daily mandatory turnover during the last year (compulsory practical training periods – tirocinio), from the end of the second semester of the 4th year (VIII semester), a 8 UTC period of mandatory activity (turnover system during night and week-end) in the teaching hospital has been set up to allow a minimum of two to a maximum of four weeks (one/two weeks on large animals and one/two on small animals) during which each student has to rotate for from 20.00 to 8.00, including one or two week-ends, to train 1 hands-on activity in the Emergency Service of the teaching hospital (see details in chapter 2).

The second step of this revision (*substantial revision of the curriculum*) is actually running and focusses on the main objective to increase practical work along all of the 5 years curriculum, as requested and suggested by the Expert Team several times in his report. This objective is monitored by the Per-year Committees whose duty, in collaboration with the students of each single year, is to provide solutions for the problems highlighted.

Particularly:

- All the teachers have been requested to review their teaching programme including more supervised and practical work.

- Mainly during the first years, practicals and hands on learning has been improved in the courses of anatomy, physiology, biochemistry, pharmacology and microbiology.
- The possibility of integration of the courses based on the inclusion of clinical UTC in the courses of the first years has been put down by the new Ministry indications. Essentially however, basic sciences will continue to prospect practical hours managed together with clinical teachers to show students the importance of these basic sciences for their later clinical training.
- From the 1st year on, each student will have a personal “Log-book” in which all the compulsory practical activities (listed following mainly the Annex IV of the SOP - list of recommended essential competences at graduation: “day-one skills”) will be registered and attested along the curriculum.
- The learning materials for the theoretical and practical hours within an UTC are made available for the students at the beginning of each course (and available in the Faculty library).

IV.2 Basic subjects

According to the EAEVE Committee recommendations, a special effort has been undertaken to integrate basic disciplines with clinical cases; this is particularly true for Anatomy and Physiology.

The hours and number of practicals has been implemented in Functional Anatomy, where the number of practical and supervised sessions have been increased, with a better balance between practical and theoretical work (ratio of 0,4:1). As for Physiology, the practical courses on cardiovascular system have been implemented jointly with the clinical colleagues (ECG, haematology). The other recommendations made have been addressed by the microbiologists and pharma/toxicologists and are currently under implementation.

The recently introduced personal “Log-book” will be a unique tool to monitor the impact and effectiveness of practical courses starting from the first year course.

IV.3 Animal Production / Farm Animal Health

The new organisation of the teaching activity concerning practice in the clinical fields in two main areas (i.e. large and small animals) and particularly the definition of a compulsory teaching hospital activity divided on small and large animals activities have allowed to identify clearly the teaching staff explicitly responsible for internal medicine and surgery of farm animals.

Illustration of problems related to herd health and nutrition analyses and advice cases for students on the private farms which have agreements with the Faculty for teaching purposes (3 dairy farms, 2 large farms for swine and 2 rabbit farms) have been implemented.

Within those private farms that have an arrangement with the Faculty for integrative teaching activity, efforts have been made to treat also the individual animals and integrate this into the herd health programme. This has been done not only involving the clinical teaching staff of the Faculty but also including in the agreements an active interaction with the local practitioners on these farms. By this way, during the compulsory practical training period on animal production, all the students have been involved in practical activities on individual animals as, for example for swine: piglets castration, iron injections, pigs vaccination, sows BCS evaluation, sows artificial insemination.

Furthermore, dead animals from the same farms (particularly from piggeries and rabbitries) have been transferred to the Necropsy service of the Faculty allowing a complete follow up of the pathological cases occurring in the farms.

IV.4 Clinical subjects

The re-location of the pharmacology and toxicology unit inside the New VTH in Piano D'Accio will fill the missing link between pharmacology/toxicology in basic sciences and therapeutics in clinical sciences. The large area dedicated to laboratory in the new VTH allows to have also a direct link between clinical sciences and microbiology, bacteriology, virology, parasitology and pathology and will improve the quality of the practical work at the VTH.

The stray dogs kennel located in Chiareto ensures proper hospitalization of stray dogs in cooperation with local county veterinarians. This premise was extremely important, for instance, after L'Aquila earthquake. Many dogs coming from the earthquake area were housed in Chiareto.

The students during the practical rotation assist to procedures like ovaro-hysterectomies and are asked to perform this surgery on their own under supervision of a dedicated surgical team. A structured surgical exercise using either isolated organs (intestines, bladder, stomach), cadaver or surgical models (bones) has been introduced in the log book mentioned in the paragraph IV.1.

Students admitted to practical work (4th and 5th year) have to pass the pertaining exams including the first part of food inspection, surgical semeiotic and pathology and medical semeiotic and pathology.

The practical activity in 3 areas (Internal medicine, Obstetrics and gynecology and surgery) of the 6 areas of expertise taught in the tirocinio will be organised offering clinical rotation of smaller group of students.

The clinical work on bovine and pigs in conjunction with food production/zootechnic have been improved and it has been described in the paragraph 4.3.

A diplomate of the European College of Veterinary Diagnostic Imaging is teaching radiology and diagnostic imaging. Room housing CT scan/MRI are provided in the new VTH. At the time an agreement with a private veterinary hospital to perform CTscan and MRI has been set up.

A diagnostic imaging service for referred clinical cases either small and large animals is planned.

The faculty includes Diplomates at European Colleges (EC) in Pathology, Parasitology, Surgery large animal and Neurology. In the new VTH more Specialisation at the European College Diploma level will be offered through agreement with EC Diplomate practitioners.

IV.5 Food Hygiene & Technology and Veterinary Public Health

According to the suggestions of the Expert Team the number of practical sessions during the courses in Food Hygiene subjects (Certification of food products, food hygiene and food quality, Food inspection and Food science and technology) has been increased particularly in the disciplines concerning the primary products.

Practical sessions and supervised work has been organized inside and outside the class schedule. Researchers of Food hygiene staff have organized monthly a supervised work session on live bivalve molluscs, fishery products and on viscera of domestic animals recovered from local slaughterhouses.

The student's work, in the slaughterhouses contracted with the Faculty, under the direct control of public veterinarians (ASL), has been organized in such way that each student has the possibility to study complete case reports from the visit of the animal before slaughtering to the inspection of the carcasses and the respective viscera resulting to the meat inspection.

Researchers of Food Hygiene staff have also improved their active collaboration with the Pathologists and with colleagues of the Parasitological unit in order that students can follow pathological diagnosis and possible links to the agent or cause of the lesions (e.g. parasitological or infectious disease).

As implementation to that reported in the SER 2007, practical sessions on anatomy, biological classification and sensorial evaluation, according to the Regulation (EC) 854/2004, of live bivalve molluscs and fishery products have been introduced in the course of Food inspection, Control and Hygiene of primary products.

Learning resources, like specialised books, are now available for the students. Teaching material can directly be made available for the students in the new “Teacher’s home page”, with a link section and a download section.

V TEACHING QUALITY & EVALUATION

Teaching methodology

Lecturers are still very motivated trying to maintain and improve the approach with students.

The system for the evaluation of the courses has been improved being based on a new data processing method recently managed by the Central Secretary. Following each examination, the outcomes have to be loaded by the responsible of the course on the dedicated University web site, , giving the opportunity to follow real time the number of students who passed their exam, the delay between the end of the course and the getting through the exam, the number of students rejected etc. These statistics are also available for the Course President and for the Per-year Committee, allowing to evidence possible difficulties and to cross these data with those derived from the periodic, anonymous and voluntary evaluation of teaching activities based on the opinions of students (in accordance with law no 370/99, Evaluation Nucleus of the University, NUVA).

The new Teaching Hospital will offer the possibility to improve practical work, particularly clinical exposure.

Efforts have be set up to expose more students at an earlier stage to clinical cases, extending the practicals in animal handling in the first years.

Feedback and guiding studies during the clinical period and particularly during rotations will be set up using a report system which will be compulsory.

A deep revision of the teaching programmes, mainly for practice, will be put into action to reduce “self study”. Teaching material is now available for the majority of the courses on power point presentations which are given to the students at the beginning of the lessons, allowing to stimulate concentration on the lecture and to provide a track for the preparation of the exam.

Planning study load and pressure of exams has been better balanced for every year, particularly in the second year.

Examinations

There is still no time limit within which an examination must be passed and the number of time a student can sit the examinations, but this system is due to national legislation.

The new curriculum of the degree course however, with general pathology as a compulsory preparatory course for *all* the exams of the 3rd year should act as a system in which students are forced to stop in the earlier years, when they failed to pass the two first years examinations and strongly discourage students to start the third year when they did not finished all the examinations of the 2nd year.

VI FACILITIES & EQUIPMENT

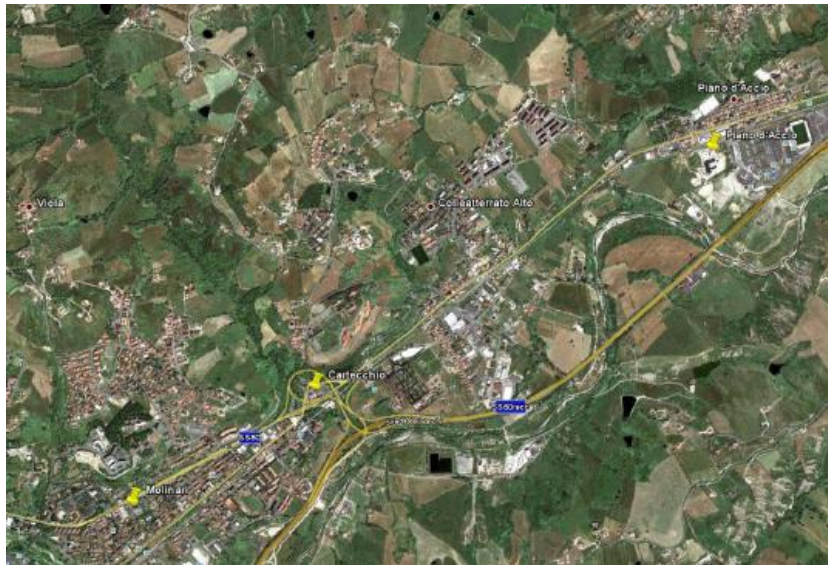
6.1 GENERAL ASPECTS

The facilities actually located in “Cartecchio” will move at the beginning of 2011 in the new premise “Piano d’Accio” (see Annex 1 Map A).

The premise of Piano d’Accio is described in the following paragraph and annexes.

All lecture room of the 3rd, 4th and 5th year, practical tutorial teaching, continuing education, specialisation schools and the library will be located in “Piano d’Accio” (see Annex 1 Map E)

The Department of Veterinary Clinical Sciences and two units of the Department of Food Science including Pharmacology and Toxicology and Animal Production will be also located in “Piano d’Accio” (see Annex 1 Map D and E)



Satellite view of Piano d’Accio

6.2 CLINICAL FACILITIES & ORGANISATION

The new VTH “Piano d’Accio” is situated in a one floor building (2900 square metre) (See Annex 1 Map B. The following annex show all the facilities of the VTH:

Reception, two waiting rooms SA, a consultation room equipped for emergency an four consultation rooms for Small Animals (SA), emergency lab, three surgical theatres for small SA, two scrub rooms for the surgical team SA, a preparation/induction/recovery room SA, sterilisation, two dressing rooms for student and surgical team, radiology SA, digital radiology room, diagnostic imaging and small animal surgery lecture room, ultrasound and other diagnostic procedures rooms, RMN / CTscan room, hospitalisation stationary dogs, hospitalisation stationary cats, ICU small animals, isolation dog and cat, room for veterinarians and students involved in 24h emergency service.

Two consultation rooms for large animals (LA), two surgical theatres for LA, scrub room for the surgical team LA, a preparation/induction/recovery room, radiology large animals, endoscopy and ultrasound LA, ICU LA, clinical pathology laboratory LA and hospitalisation large animals including isolation (see Annex 1 Map C). Necropsy room.

VII ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

Concerning animals and teaching materials of animal origin, it has to be outlined that, *for Basic Sciences* (Anatomy of domestic animals, Histology and Embryology of domestic animals, Physiology, Veterinary Microbiology, Parasitology), efforts have been made to improve the practical activity of the students using in a greater measure live animals and lab exercises. These activities will be monitored starting from the first year course using the recently introduced personal “Log-book” which will include the practical activities performed and certified for each student.

For *Pathological anatomy*, the efforts made to improve the teaching material used for practical work (organs and entrails and entire cadavers) are reported in **Chapter 1**. As for the other courses, the practical activity will be registered on the “log-book” starting from the first year course, but also to-date Students are required to sign after their practical lessons and students may only take the end of course exam if they have signed for one large animal and one small animal necropsy and different isolated pathological organs examination. Furthermore, adequate data retrieval system and data base of all organs and animals collected by the Pathology unit are available so that students can undertake case studies.

For *Animal Production*, the faculty still work in the small Faculty Farm in Chiareto which include stables, cowshed and sheepfold permanently occupied by normal animals, mainly horses, cattle and sheep, which are maintained for the practical teaching of veterinary semiotic, animal husbandry, feeding routine, herd hygiene and handling livestock. Herd health and industrial management of farm animals are still taught in several farms agreed for teaching and research purposes (2 industrial pig farms, 2 rabbit farms and 3 dairy cows farms).

An improvement of the activity concerning farm animals has been done involving the clinical teaching staff of the Faculty on clinical problems on individual animals in the herds, and also including in the agreements an active interaction with the local practitioner on these farms. Furthermore, dead animals from the same farms (particularly from piggeries and rabbitries) have been transferred to the Necropsy service of the Faculty allowing a complete follow up of the pathological cases occurring in the farms.

Concerning *Food Hygiene*, organs are still obtained every week from some slaughterhouses located in the Municipality of Teramo and L'Aquila or Chieti (Communal slaughterhouses). A properly adequate vehicle is available for transportation of organs from the slaughterhouses to the necropsy room. It is maintained and operated to ensure the safety of students and staff and to prevent the spread of infectious agents. Furthermore, a supervised work session on live bivalve molluscs, fishery products (according to the Regulation (EC) 854/2004) and on viscera of domestic animals recovered from local slaughterhouses is organised monthly for the students. Students moreover have free access to the different slaughterhouses for the inspection of organs where they are supervised by the Official Veterinarian (ASL) of the plant.

Consultations are actually still done in the Cartecchio Teaching Hospital, even if from Autumn 2010 the new teaching Hospital in Piano d'Accio will offer better premises that will surely improve the logistics and will house more facilities for the practical work of students. The increased clinical activity will allow student to participate directly in the clinical management of cases.

The clinical activity of VTH is now organized to give assistance 24 hour/day 365 day/year. The routine clinical activity is running from Monday to Friday from 8.00 to 17.00. During this period are accepted referral cases or emergency cases. From 17.00 to 8.00 is active an emergency service run by dedicated veterinarians and students. In case of an emergency the clients can phone to a dedicated number +39.334.6104143 or ring directly to the reception of the VTH.

To allow students practicing on farm animals, Chiareto still houses the large animals of the Obstetric-Gynaecology Unit of the Department of Veterinary Clinical Sciences as well as the Faculty Farm and the Kennel for stray dogs. In addition, as already reported, teachers from clinics are now involved in the activities on the agreed farms where small groups of students have, in turn, the possibility to increase their practical knowledge.

In succession here are reported some tables as an up to date illustration of the clinical activity carried out by the Faculty during the last three years.

PATIENT FLOW IN THE FACULTY

Table 1. Number of cases received for consultation and/or hospitalised in the Faculty clinics, in the past three academic years

Species		2009/2010 1 st March 2010-30 th June 2010)	2008/2009 1 st March 2009- 28 th February 2010)	2007/2008 1 st March 2008- 28 th February 2009)	Average
Food-producing animals	Bovine	10	12	11	28
	Small ruminants	8	12	14	
	Pigs	6	5	6	
Poultry		45 ^a	43 ^a	46 ^a	67
Rabbits		34 ^b	32 ^b	-	
Equines		160	248	221	210
Companion animal/exotic	Dogs	521	1779 ^c	1268	1470
	Cats	115	278 ^c	322	
	Others:	61	45	21	
	(ferrets, iguanas, turtles, rabbits, hamsters, genets, chinchillas, snakes, wolves, otters parrots, owlets etc)				

^a) individuals visited in herds during the practical teaching activity in Avian Pathology

^b) including animals visited in herds during the practical teaching activity in Animal Production or visited in clinics

^c) including companion animals visited in the outside "emergency hospital" after the 2009 earthquake in L'Aquila.

Table 2. Number of cases received for consultation and/or hospitalised in the Faculty clinics, in the present academic year 2009/2010 (1st March 2010 – 15th September 2010)

Species		1 st March 2010 - 15 th September 2010
Food-producing animals	Bovine	11
	Small ruminants	19
	Pigs	6
Poultry		45
Rabbits		34
Equines		304
Companion animal/exotic	Dogs	1096
	Cats	236
	Others:	63
	(ferrets, iguanas, turtles, rabbits, hamsters, genets, chinchillas, snakes, wolves, otters parrots, owlets etc)	

Table 3. Number of cases received for consultation and/or hospitalised in the Faculty clinics, from 15th September 2009 to 14th September 2010

Species		15 th September 2009- 14 th September 2010
Th Food-producing animals	Bovine	15
	Small ruminants	21
	Pigs	6
Poultry		45
Rabbits		34
Equines		382
Companion animal/exotic	Dogs	1854
	Cats	351
	Others:	76
	(ferrets, iguanas, turtles, rabbits, hamsters, genets, chinchillas, snakes, wolves, otters parrots, owlets etc)	

Animals available for clinical training (in the clinics of the Faculty or seen through the Ambulatory clinic) as ratio to the number of students in last full year of clinical training (2008/2009)

R 11:

no. of students
graduating annually

$$\frac{\text{no. of food-producing animals seen at the Faculty}}{\text{no. of food-producing animals seen at the Faculty}} = \frac{46}{29} = \frac{1}{0.63} \text{ Denominator } 0.63$$

R 12:

no. of students
graduating annually

$$\frac{\text{no. of individual food-animal consultations outside the Faculty}}{\text{no. of individual food-animal consultations outside the Faculty}} = \frac{46}{475} = \frac{1}{10.32} \text{ Denominator } 10.32$$

R 13:

no. of students
graduating annually

$$\frac{\text{number of herd health visits}}{\text{number of herd health visits}} = \frac{46}{6} = \frac{1}{0.13} \text{ Denominator } 0.13$$

R 14:

no. of students
graduating annually

$$\frac{\text{no. of equine cases}}{\text{no. of equine cases}} = \frac{46}{248} = \frac{1}{5.39} \text{ Denominator } 5.39$$

R 15:

no. of students
graduating annually

$$\frac{\text{no. of poultry/rabbit cases}}{\text{no. of poultry/rabbit cases}} = \frac{46}{75} = \frac{1}{1.63} \text{ Denominator } 1.63$$

R 16:

no. of students
graduating annually

$$\frac{\text{no. of companion animals seen at Faculty}}{\text{no. of companion animals seen at Faculty}} = \frac{46}{2102} = \frac{1}{45.7} \text{ Denominator } 45.7$$

R 17:

no. of students
graduating annually

$$\frac{\text{Poultry (flocks)/rabbits (production units) seen}}{\text{Poultry (flocks)/rabbits (production units) seen}} = \frac{46}{7} = \frac{1}{0.15} \text{ Denominator } 0.15$$

VIII LIBRARY AND LEARNING RESOURCES

The library of the Faculty of Veterinary Medicine presents a library holdings consisting of 6116 documents at 31.12.2009 (prevalently of periodical magazine).

From a managerial point of view, the library has not a specific own budget to use in an autonomous way, but the University provides for the technical and instrumental equipment, while the purchases are directly carried out by the Departments and/or by the Faculties. For the purchase of the course books there is a specific organization referred to the “Library Service Sector” that has € 18.462,94 available at 31.12.2009, as residual fund from 1997 University budget.

Besides the monographs and periodical magazines, the library collects and keeps not only the degree thesis discussed at the Faculty (authorized by the authors for the consultation and protected by property rights) but also the supplementary didactic material deposited by Academic staff on paper or electronic devices (for a total of 330 documents at 31.12.2009).

The library services, consisting *in loco* consultation and loan at home, totalized 1881 requests in the year 2009, whereas the interlibrary loan, the document delivery through ACNP and NILDE systems, the supporting activity for all users in bibliographic research and the distribution of didactic material, counted a total of 430 requests in the year 2009.

The University of Teramo continue to be a member of the CIBER, Coordination Interuniversity Databases and Publishing Online (Coordinamento Interuniversitario Base dati ed Editoria in Rete). It regards a Digital Library service for access to electronic, multidisciplinary headings (more than 10.900 at 31.12.2009), published by the main editors in the scientific academic field, whose user interface is the WEB portal, available at internet address <http://periodici.caspur.it>. From February 2010, the electronic services have been enriched with the more functional Web 2.0 platform that contribute to make more powerful the traditional online services related to bibliographic research.

Currently, the users from the Faculty of Veterinary Medicine (as well as of the entire University) can access the “full text” version of 2.800 titles published by Springer editor, more than 320 titles published by *Elsevier* and *Cell Press* editors, 21 titles from *Kluwer Law* editor, and 1.000 titles belonging to the collection “Arts & Sciences I” published by JSTOR.

The main critical point in the library organization continue to be represented by the impossibility to assume the role of an autonomous spending centre. This critical point makes more difficult the library planning for the equipment investments and for the learning resources improvement.

In the year 2009, the library activity has showed a remarkable increase in the number of loans (1881) compared to previous data reported in the year 2006 (942). Considering this perspective, the lack of an adequate number of qualified and supporting personnel, as well as the slight number of reading places for students, seem to represent limiting factors for the development of a more functional library service.

The purchases centralization should represent the main solution to the problems of the library allowing a better organization of the bibliographic resources and providing more and specific investments oriented to increase the library holding, the personnel and the available technical means.

IX ADMISSION AND ENROLMENT

Since the academic year 1989/90, admission to the Faculty of Teramo is granted on a restricted number basis (*numerus clausus*) and from the academic year 2008/2009 the fixed number of students that can be enrolled for the first year has been shorten from 90 places for Italian or EU citizens and 5 places for non-EU students to:

- 70 places for Italian or EU citizens and foreign students with equivalent qualifications
- 5 places for non-EU students resident abroad.

Table 9.1: Intake of veterinary students in Teramo Faculty

Year	Number applying for admission	Number admitted "standard intake"
2009-2010	369	70
2008-2009	334	67
2007-2008	298	85
2006-2007	242	90

The university entrance examination stills consists, at a national level, in 80 multiple-choice questions (referring to Logic and general knowledge - 40 questions; Biology - 18 questions; Chemistry - 11 questions; Physics and mathematics - 11 questions) and a test duration of 120 minutes.

The university entrance examination is conducted, on the same data and in the same way, in all the Italian Faculties of Veterinary Medicine through a national organization.

Students from the same undergraduate course at other universities may also be accepted. The places available are fixed each year on the basis of the number of places left free after the university entrance examination and the irreversible refusal of course placement or the transfer to other courses, or Institutions: For the academic year 2008/2009 this number of places was equal to 5 for each of the five-year courses.

The number of students applying (Table 9.1) is higher (with a 18% rough average) than the number that actually sits the university entrance examination; a certain number of applicants also pre-enrol with other Faculties of Veterinary Medicine or other health-related faculties and decide where to sit the exam at the last minute.

The number of students graduating annually is presented in table 9.2

Table 9.2: Number of students graduating annually (from undergraduate training) over the past five years

	Year	Number graduating
	2009/2010	46
	2008/2009	39
	2007/2008	46
	2006/2007	36
	2005/2006	33

Considering the undergraduate students composition, still remain the critical point already outlined in 2007 (table 9.3) of the number of students enrolled after the fifth year of regular course schedules, thus appearing that the average duration of studies is particularly long (table 9.4).

Table 9.3: Undergraduate students composition

a.	Total number of undergraduate students	692
b.	Male students	250
c.	Female students	442
d.	Nationals	664
e.	Foreign students	28
	- from EU countries	12
	- from non-EU countries	16
f.*	1 st year student	65
g.*	2 nd year students	74
h.*	3 rd year students	111
i.*	4 th year students	113
j.*	5 th year students	80
k.**	6 th or subsequent year students	231
l.***	Intermediate off-course students	18

* The points corresponding to f., g., h., i. and j. include also the students repeating the year.

** These students have satisfied all obligations linked to the attendance of theoretical and practical teaching sessions and are not normally present in the Faculty unless they come to sit the exams that they have yet to pass.

*** These students, not normally present in the Faculty unless they come to sit the exams that they have yet to pass, are characterized by a strong indebtedness in terms of exams and wait the following year to take the university entrance examination. During this time, they may sustain oral exams without compulsory attendance to the course

Table 9.4: Average duration of studies

	Duration of attendance	Academic year				
		2009	2008	2007	2006	2005
		number	number	number	number	number
k.	4 years	0	0	0	0	0
l.	5 years	2	3	0	1	2
m.	6 years	10	11	13	7	11
n.	7 years	19	13	10	10	9
o.	8 years	9	7	11	6	8
p.	9 years	4	3	6	7	0
q.	10-13 years	1	2	4	0	2
r.	more than 13 years	1	0	2	5	1
Average duration of studies		8,8	7,3	9,5	7,7	6,3

The new curriculum elaboration (chapter IV) of the degree course (with a lighter second year, more practical teaching and general pathology as a compulsory preparatory course for all the exams of the 3rd year, acting as a system in which students are forced to stop in the earlier years, when they failed to pass the two first years examinations and strongly discourage students to start the third year when they did not finished all the examinations from the 2nd year) could partly contribute (together with a more efficient tutoring system and more individualized teaching efforts) to reduce the average duration of attendance.

Due to national legislation, as in 2007, there is still no time limit within which an examination must be passed and the number of time a student can sit the examinations. The Faculty has no influence on this system even if there is a project to augment the tuition fees for the off-course students, with a progressive and substantial increase. Some changes at a national level are also in progress because the Ministry policy to enrol a maximum number of students per University and to link government funding directly to the number of students enrolled, regardless whether those students are so called “on course” or “off course” students is progressively moving to a more “quality-related” one, rewarding the University which are best successful in graduate their students on time. In the next future so, large numbers of trailing and unsuccessful students will be detrimental for the university budget.

X ACADEMIC AND SUPPORT STAFF

The Faculty is still involved in four Degree Courses (Veterinary Medicine, Animal Care and Welfare, Biotechnologies and Biotechnologies of the reproduction). The members of the Veterinary Medicine Faculty Academic staff occupied in the teaching activity of the Degree Course in Veterinary Medicine did not substantially changed since 2007 and still are 13 Full professors, 13 Associate professors and 16 Researchers but the Faculty the Veterinary Medicine Faculty Academic staff consists of 13 Full professors, 15 Associate professors and 30 Researchers.

The primary tasks of full professor and associate professors is teaching and research. Researchers are primarily involved in research activities and, when teaching tasks are required, the teaching load is usually half of that of professors.

The above mentioned figures all occupy budgeted posts, whereas contract/supply professors and teachers, coming from outside the Faculty, are paid by the University on the basis of the teaching load.

The Support staff consists in 40 figures considered as budgeted posts (17 employed as administration staff and 23 employed as technical staff),. Technical staff may be employed, when specifically necessary, on the basis of special requirements, in teaching activities inherent to planning and realisation of, above all, practical activities. In addition, personnel belonging to the Dean's office (4 units of administrative staff and 1 unit of technical staff) Faculty (3 units of personnel assigned to the porter's lodges) Library (3 units of personnel) Didactic tutor (1 unit of personnel) Non-budgeted posts (3 units for the care and treatment of animals and 3 units assigned to the porter's lodges) are also an integral part of the Faculty staff:

The total number of personnel responsible for undergraduate teaching (as FTE) was 38,4 at the end of 2009. So the ratio calculated on the number of students on-course at the same date (443) was:

$$\frac{\text{Number of teaching staff}}{\text{Number of undergraduate students}} = \frac{38,4}{443} = \frac{1}{11,54}$$

We remember here that we consider the ratio between teaching staff/undergraduate students referring only to on-course and intermediate off-course students because, as mentioned elsewhere, the so-called off-course students use at low level the total teaching offered each year, and only sit exams.

Also the Ratio between teaching and support staff did not substantially changed

$$\frac{\text{Number of teaching staff}}{\text{Number of support staff}} = \frac{38,4}{45,8} = \frac{1}{1,19}$$

For the calculation of the teaching staff/support staff ratio we consider the number of teaching staff for the reasons described above and the whole number of support staff (budgeted and non-budgeted posts) because they appear as roles that, generally, the University is inclined to maintain.

Concerning the method of allocation of new posts for academic staff and support staff, the present political approach of the government is tending to stop the funding of new professor posts while new posts for researchers should be developed.

However, it has to be outlined that the Ministry of Finance, as a consequence of the global economic crisis, has provided for a 3 years freeze on engagements locking so the possibilities to improve the staff availability and to reach better ratios. Some restrictions are also to be foreseen concerning the possibilities to enrol personnel as non budgeted posts.

Conversely, the Ministry of the University is going to change the recruitment criteria giving more balance between study credits and the value of good publications, weighing as a priority objective publications with high impact factors. The evaluation of the quality of teaching still remain not clearly weighted in the career paths of both professors and researchers.

Concerning the involvement of researchers in teaching activity, often hampering their possibilities to do research, there is at the moment a Ministry of University law project which aim is to entrust the same teaching duties as for professors, with a clear risk that research activities are totally swamped by teaching commitments.

XI CONTINUING EDUCATION

The Faculty has gone on holding continuing education courses at the establishment (about 20 per year) being continuing education has become an important commitment of the Faculty, related to legislation that requires veterinarians to obtain a certain number of credits each year, according to the legislation regarding the Continuing Education in Medicine (ECM system).

According to the EAEVE suggestions, contact with external organizations have been increased.

Currently 90 professional agreements were signed between the Faculty and public institutes (National Laboratories i.e IZS, AUSL of Abruzzo and Marche, Abruzzo Region, Town of Teramo, etc.) and private companies (regional and national factories, farms, veterinary clinics, etc.) with educational and practical purposes.

The building of the new Teaching Hospital and of the structures able to accommodate and modernize the services actually placed in Cartecchio will give the Faculty facilities and equipment sufficient not only for adequate undergraduate training but also to increase the Faculty appeal not only on the regional territory but also on neighbouring Regions (Rome is about 120 km from Teramo). This will allow to the Faculty to provide better support to local veterinary practitioners: the development of specialist structures inside the University can provide a better back-up to the local profession improving relations with private veterinarians increasing the number of referral cases and giving the Faculty an integrated role in the panorama of structures devoted to animal health.

XII POSTGRADUATE EDUCATION

The Faculty is active in participating in post graduate and continuing education projects.

Seminars for state veterinarians and practitioners are also open for students. Courses are recognised by the government.

Some special courses are organised for the local practitioners, with the purpose of informing the local practitioners about the work of the Faculty and to improve relations with them.

PhD (Doctorate) courses are usually activated every year. Most of scholarships are funded by University and some are founded by VII FP of the EU (ERC and SICA programmes); sometime private industries funds scholarships linked to specific research projects.

The University offers funding for post-doctorate fellowships on specific projects.

Respect to the SER 2007, according to the suggestions of EAEVE expert group, the Faculty has increased the number of Specialisation Schools.

These schools are organized in 2-3 years course to obtain the National Specialist title in: 1) Food Inspection, 2) Public Health, breeding and animal products, 3) Equine medicine and surgery and 4) Physiopathology of domestic animals reproduction.

Part-time master specialisation have been organised for

- 1) Management and production in the supply chain of poultry and rabbits
- 2) Veterinary neurology.

Actually running part-time master specialisation courses are

- 1) Management of the local development in parks and natural reserves,
- 2) Cognitive science and horse welfare
- 3) Behavioural medicine of pets (2nd level Master).

Two new part-time master specialisation courses are “work in progress”. These are the master course in “Disease of bees, health and hygiene of honey” and the master course in “Health in maxi-emergencies”

For both Specialisation schools and master courses an enrolment fee is charged.

The residencies program for “European College Veterinarian Neurology” and “European College Veterinarian Surgery of Large Animals” will also be improved according to the new teaching facilities in the new vet hospital.

XIII RESEARCH

The research activity is demanded to the Departments of the Faculty. Basic research is carried out in basic disciplines, whereas applied one is conducted both in the basic disciplines and in clinical ones.

There are several level of funding. The most accessible one is a yearly budget allocated by the Athenaeum to the research groups in all Departments (formerly 60% founds). The entity of the founds is minimal, fairly enough to obtain preliminary data for larger projects at national/international level. All projects submitted undergo peer review by external referees (normally colleagues from other Veterinary Faculties), therefore, the quality of the research and the scientific competence of the coordinator are essential and are kept under continuous control.

The main national funding body is the Minister of University (MIUR) with the PRIN and FIRB grants, both successfully granted to the Faculty. Some projects are supported also by the Minister of Agriculture and Environment and by the National Research Council (CNR). Private Companies also contribute to the research activity, particularly Pharmaceutical/Biotech companies (Bayer).

As for International Grants, the Faculty has been awarded several projects from the following funding bodies: European Science Foundation (ESF), National Institute of Health (NIH, USA), VI and VII Framework Programme of the EC (European Research Council, ERC), Interreg IIIA Adriatic Crossborder Programme (Neighbourhood Programmes of the European Community), United States Department of Agriculture (USDA);

The funds are managed by the Departments (although a new established Central Office should coordinate the international research activity) under the supervision of the Principal Investigator (PI). The PIs plan the experimental schedule which is carried on by permanent staff (researchers and technicians) as well by Post Docs, PhD Students and eventually external collaborators. Undergraduate students take part in the research activities, although there are differences between the courses. Biotechnology students are very keen in follow basic research, while veterinary students prefer to do hands on clinic research, as witnessed by 83% completing their curriculum with experimental thesis. Internal students dealing with experimental thesis are required to spend a minimum of one year doing lab/clinical work to gather all data required. The contribution given by the students to the research carried out by the Faculty is fundamental. The student's activity is supervised by the permanent staff and guided by the professor responsible for the discipline. Large emphasis is given to the acquisition of the manual (laboratory and clinic) skills by the students, which are also called to improved their communication capacity through the presentation of partial results in informal seminars, often given in English. Each research group within the Faculty has its specific field of research, although cooperation is encouraged by the Athenaeum, which gives priority to projects with a multidisciplinary (basic plus clinical sciences) character.

An increasing cohesion is taking place between the different disciplines of the Faculty, particularly between Anatomy, Physiology, Pathology, Infectious Diseases, Food Hygiene and Clinics, with some projects successfully granted at local (Athenaeum), national (MIUR), as well as international level (European Research Council, European Science Foundation, from the VI and VII FP of the EC, InterregIIIA of the EC, USDA, NIH).

The outcome of such effort is witnessed by the number of peer review publication record of the Faculty since the last EAEVE visit (more than 120 since 2007).

Given the lines of research pursued, the Faculty successfully addresses high impact, non specialist journals such as Science, Nature Biotechnology, Nature Neurosciences, PNAS; opinion making journals such the Trends series, and BioEssay. Moreover, all the disciplines composing the Faculty regularly publish their results in the best specialist journals (just to cite the main ones: Biology of

Reproduction, Lancet, Reproduction, Theriogenology, Veterinary Record, Veterinary Pathology, Placenta, Journal of General Virology, Archives of Virology, J. Food Protection, Veterinary Parasitology, Parasitology Research, Journal of Applied Microbiology, Food Control, Vet Dermatol Anim., Reproduction Science, Meat Science, Livestock Science, Animal Welfare, Diseases of Aquatic Organisms). Many professors and researches of the Faculty serve as referees for the specialist and specialist journals cited above: they are also very active in organizing international meetings/workshops.

