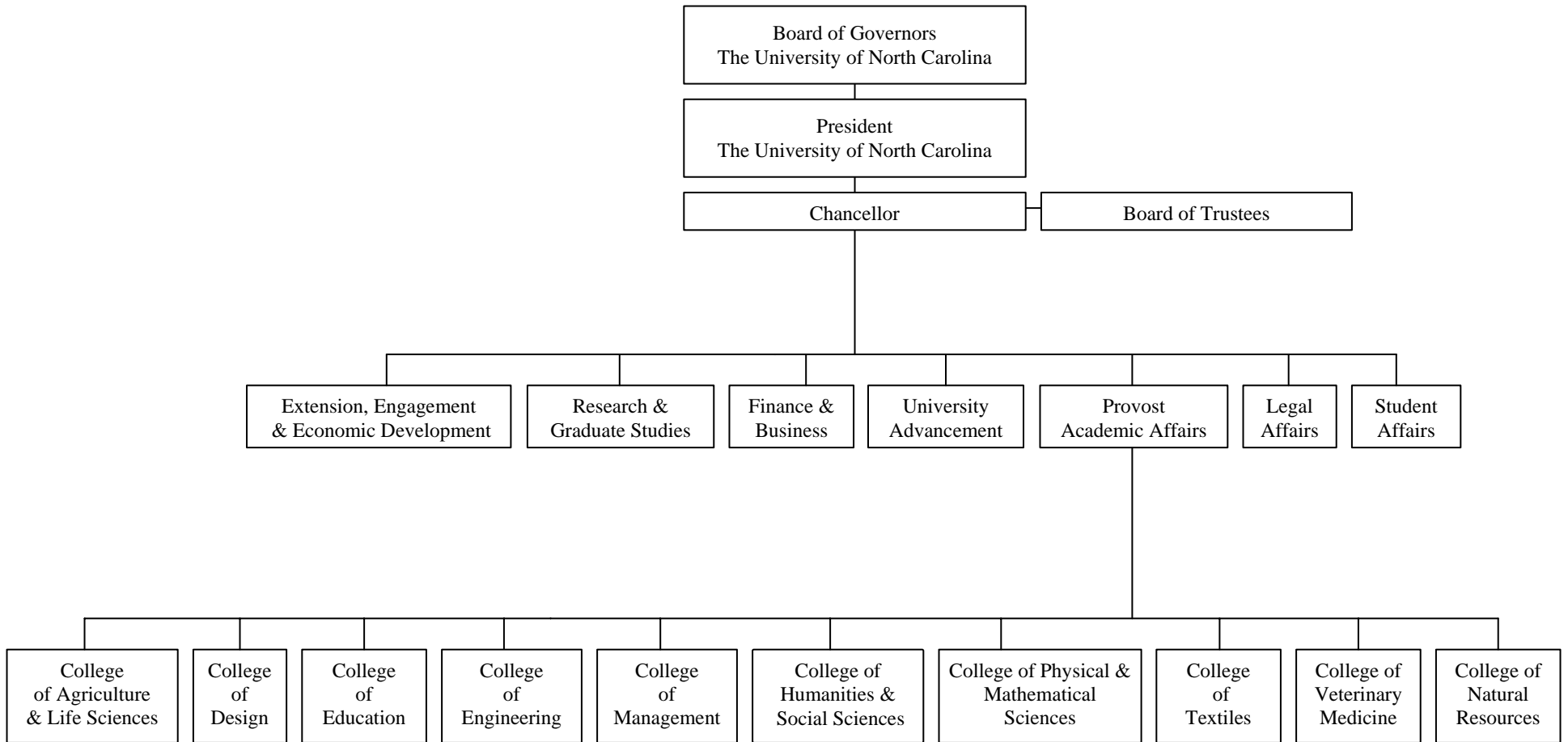


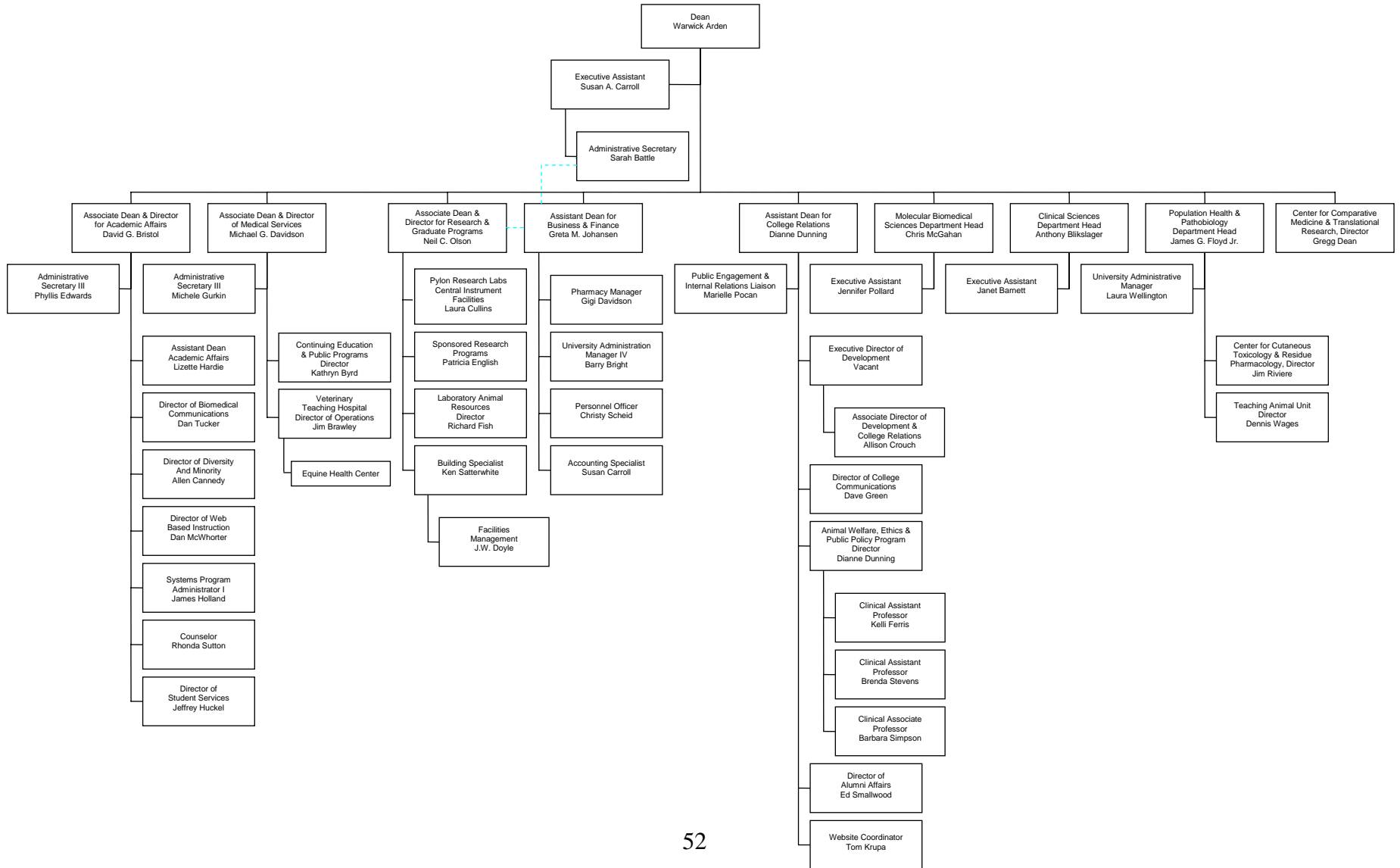
APPENDIX 1-1: ORGANIZATIONAL CHART OF NORTH CAROLINA STATE UNIVERSITY



An extended NCSU organizational chart is located at <http://www2.acs.ncsu.edu/UPA/uniorchart/chart.pdf>

Chancellor	James L. Oblinger
Provost and Vice Chancellor for Academic	Larry A. Neilsen
Vice Chancellors	
James J. Zuiches	Extension, Engagement and Economic Development
Charles Leffler	Finance and Business
Mary Elizabeth Kurtz	Legal Affairs (also General Counsel)
John G. Gilligan	Research and Graduate Studies
Thomas H. Stafford, Jr.	Student Affairs
Terry G. Wood	University Advancement
Denis Jackson	Assistant Vice Chancellor
Vice Provosts	
Katie Perry	Senior Vice Provost, Office of the Provost
Tom Miller	Distance Education and Learning Technology Applications
José Picart	Diversity and African-American Affairs
Louis Hunt	Enrollment Management and Services
Joanne Woodard	Equal Opportunity and Equity
Sam Averitt	Information Technology Division
Bailian Li, Interim	International Affairs
Susan Nutter	NCSU Libraries
Deans	
Johnny C. Wynne	Agriculture and Life Sciences
Marvin J. Malecha	Design
Kathryn Moore	Education
Louis A. Martin-Vega	Engineering
Terri Lomax	Graduate School
Toby L. Parcel	Humanities and Social Sciences
Ira R. Weiss	Management
Robert D. Brown	Natural Resources
Daniel L. Solomon	Physical and Mathematical Sciences
Blanton Godfrey	Textiles
Thomas E. H. Conway, Jr.	Undergraduate Academic Programs
Warwick Arden	Veterinary Medicine
Faculty Senate	
Nina S. Allen	Chair
Robert Bruck	Secretary

APPENDIX 1-2: ORGANIZATIONAL CHART OF THE COLLEGE OF VETERINARY MEDICINE



Dean	Warwick Arden, BVSc, PhD, DACVS
Associate Deans	
David G. Bristol, DVM, DACVS, DABVP	Academic Affairs
Michael G. Davidson, DVM, DAVCO	Veterinary Medical Services and Continuing Education
Neil C. Olson, DVM, PhD, DACVS	Research and Graduate Programs, Biomedical Centennial Campus
Assistant Deans	
Dianne Dunning, DVM, MS, DACVS	College Relations
Elizabeth M. Hardie, DVM, PhD, DACVS	Academic Affairs
Greta M. Johansen, MBA	Business and Finance
Department Heads	
Anthony Blikslager, DVM, PhD, DACVS	Clinical Sciences
Chris McGahan, PhD	Molecular Biomedical Sciences
James G. Floyd, Jr., DVM, MS, DACT	Population Health and Pathobiology
Directors	
Gregg Dean, DVM, PhD, DACVP	Center for Comparative Medicine and Translational Research
Allison L. Crouch, Interim	Development and College Relations
Jim Riviere, DVM, PhD	Center for Chemical Toxicology Research and Pharmacokinetics
Faculty Senators	
Lloyd Fleisher, PhD	
Sam Jones, DVM, PhD, DACVIM	

APPENDIX 1-3: CVM COMMITTEES

Faculty Committee on Academic Performance and Student Conduct: This committee is composed of 10 members: one faculty member elected from each of the three departments and one elected from the faculty at large, one student elected from each class, one elected postdoctoral trainee, and the Associate Dean of Academic Affairs (ex-officio). The specific responsibilities of the committee include formulation, recommendation and implementation of policies and procedures regarding those aspects of student academic performance and student conduct pertinent to the professional and educational development of the student. The committee is responsible for adhering to the guidelines set forth by the academic standards and student conduct documents of the CVM, and to recommend courses of action related to student conduct and academic performance issues

Faculty Committee on Awards and Scholarship: This committee is composed of four members: three faculty representatives, one elected from each department for three-year staggered terms, and the Associate Dean and Director for Academic Affairs (ex-officio). The responsibilities of this committee are to establish award policies, to define recipient criteria and to expedite selection procedures for all CVM student and faculty awards. The committee elects one of its members to represent the CVM for University awards and scholarship purposes.

Faculty Committee on Admissions: This committee is composed of at least 18 members. Each department elects four members to the committee. The remainder of the committee includes: the President of the NCVMA or his/her designee; one representative from the NCSU College of Agriculture and Life Sciences (recommended by the Dean); one member-at-large from the University of North Carolina system appointed by the Dean; the Associate Dean and Director for Academic Affairs at the CVM; the Director of Student Services; and the Director of Diversity and Minority Affairs. This committee recommends policy and admission criteria for admitting candidates to the professional veterinary program. This committee also recommends pre-professional course requirements relevant to the program in general. Additionally, the committee is responsible for regular review of admission procedures. It is the function of this committee to make recommendations to the Dean for each student to be admitted to the professional program.

Faculty Committee on Curriculum and Course Evaluation: This committee is composed of 13 members. Two faculty members are elected from each department and one student is elected from each class. In addition, the Associate Dean and Director for Academic Affairs, the Assistant Dean of Academic Affairs and the CVM representative to the Administrative Board of the Graduate School serve as ex-officio members. Each department and class also appoints an alternate member, who may attend any and all meetings and serves as a voting member in the absence of an elected member from the respective department or class. The function of this committee is confined to matters of the professional DVM curriculum and to the periodic review of those course offerings. The responsibilities of the committee are to recommend to the faculty curricular content and program development and to conduct ongoing reviews of all DVM courses.

Faculty Committee on House Officer Programs: This committee is composed of 11 members. Elected members of the committee include seven members of the faculty who are involved in house officer training (three members from the Department of Clinical Sciences; two members from the Department of Population Health and Pathobiology; two members from the Department of Molecular Biomedical Sciences) plus two residents. The Associate Dean and Director for Veterinary Medical Services and the Director of Student Services serve as ex-officio, nonvoting members. The responsibility of this committee is to evaluate internships and residency programs, and is advisory to the Associate Dean and Director for Veterinary Medical Services.

Faculty Committee on Library and Education Resources: This committee is composed of 10 members: the Librarian, one faculty member elected from each department, one student elected from each class, one elected graduate student representative (ex-officio), and a representative appointed by the Dean. Members serve three-year terms. The responsibility of this committee is to recommend policy relating to all library and audiovisual decisions. This encompasses establishment of ordering priorities, hours of the library, recommending upgrades and maintenance of library furniture and equipment, continued review of current accessions, publication list updates and recommendation of general budget factors to the appropriate bodies. The function of the committee is to establish user-focused services and programs for all library users, including departments, faculty, students and visitors utilizing the CVM facilities and materials.

Faculty Committee on Research: This committee is composed of nine faculty members appointed by the Dean, three from each department. Members serve three-year staggered terms. The Director of Laboratory Animal Resources and the Associate Dean and Director for Research and Graduate Studies serve as permanent, ex-officio, non-voting members. The CVM representatives on the University Research Committee, if they are not already departmental faculty members on this committee, serve as ex-officio, non-voting members. The responsibility of the committee is to evaluate research proposals for scientific merit and feasibility in regard to facilities and expertise. The committee serves as a source of information on funding available for research, and provides recommendations on priorities and distribution of unrestricted research funds. It also provides advice on the use of facilities, purchases of equipment and recruitment of technical staff for general counsel in recommending long- and short-range direction for research efforts of the CVM. The committee oversees use and policies related to all central research facilities, including Laboratory Animal Resources (LAR) and the Central Procedures Laboratory. The committee advises the Director of LAR and the Associate Dean for Research on programmatic directions and fee schedules, and how best to meet the needs of faculty using these facilities.

Faculty Committee on Veterinary Faculty Practice Plan (VFPP): This committee is composed of 10 members: the Dean or his/her designee as chair, the three Department Heads, the Associate Dean and Director for Veterinary Medical Services, the Hospital Administrator, one faculty member elected from each department for a three-year nonrenewable term, and one faculty member elected at-large from all clinical faculty for a two-year nonrenewable term. The committee advises the Dean on matters relating to management and operation of the VFPP.

Hospital Board: The Hospital Board is composed of 15 members. Permanent, ex-officio members include the Associate Dean and Director for Veterinary Medical Services, the Hospital Administrator, the Assistant Dean for Business and Finance, and four staff members appointed by the Associate Dean and Director for Veterinary Medical Services. One additional staff member elected by the staff sits on the Hospital Board for a two-year term on a rotating basis. The other elected members on the Hospital Board are the seven Service Chiefs. Service Chiefs serve three-year terms at staggered intervals and may succeed themselves. The services represented are equine medicine and surgery, small animal surgery, small animal medicine specialty services, small animal emergency/critical care, radiology/anesthesiology, farm animal specialty and field services, and clinical laboratory services. It is the Board's responsibility to establish and review the practices and policies of the hospital. The Board examines and recommends standard fees for hospital and professional services, reviews professional standards and performance, and grants and approves faculty hospital privileges; the Board is in effect the governing body of the hospital.

Comparative Biomedical Sciences (CBS) Graduate Studies Committee: This committee is composed of 12 members: one member of the CVM graduate faculty elected from each of the five recognized CBS areas of concentration (Cell Biology, Infectious Disease, Pathology, Pharmacology and Population Medicine), two at-large members elected by the entire CBS graduate faculty, the CBS Director of Graduate Programs, two elected graduate students, the Director of Student Services, and the CVM representative to the Administrative Board of the Graduate School. The Director of Student Services and the Administrative Board of the Graduate School representative serve as ex-officio, non-voting members. It is the responsibility of this committee to develop and evaluate the CBS graduate program, develop CBS graduate courses, and review and vote upon all admissions to the CBS graduate program. The committee and the Directors of the Immunology and Physiology graduate programs (or their chosen representatives) review all applications for CVM stipends, prioritize them, and submit this prioritized list to the Associate Dean and Director of Research and Graduate Studies for final dispensation.

Faculty Committee on Reappointment, Promotion and Tenure: This committee is composed of eight members: two members elected from each department and two members elected at-large. Membership on the committee is restricted to faculty holding the rank of Professor. The responsibilities of this committee are to examine and vote on the dossiers of faculty being considered for reappointment, promotion without tenure, and promotion with granting of tenure.

APPENDIX 2-1: FINANCES - TABLES A & B

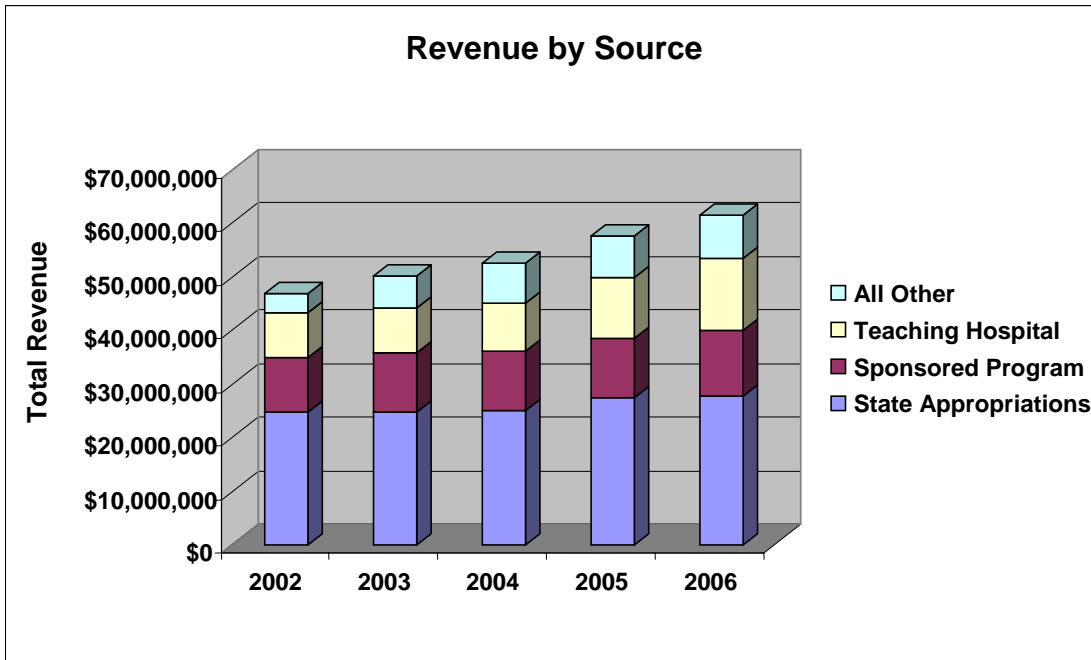
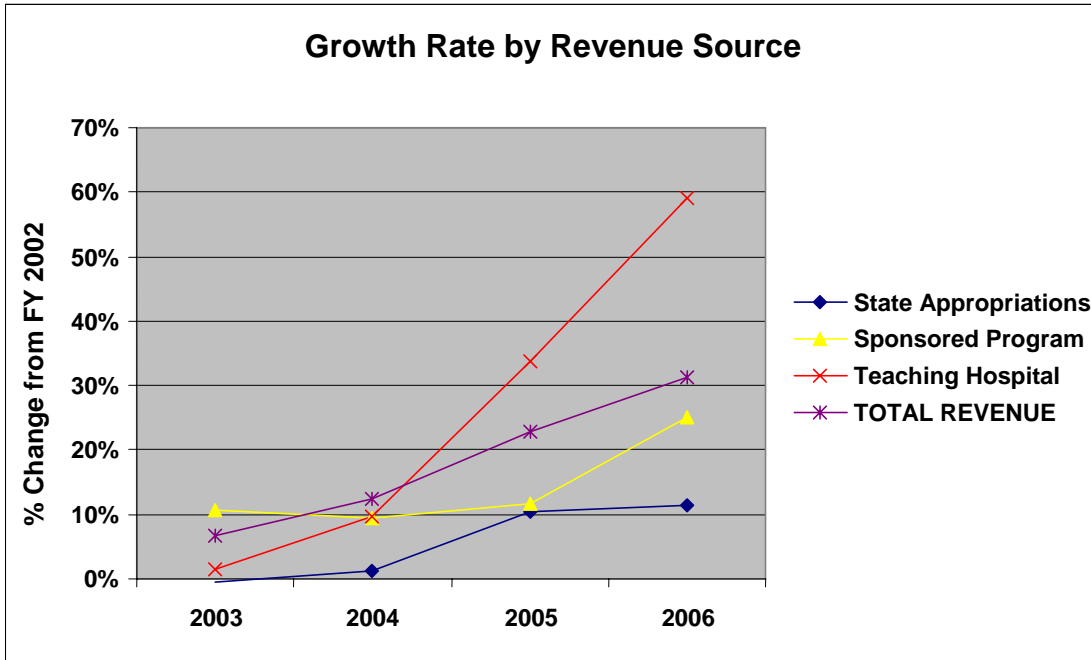
TABLE A - TOTAL EXPENDITURES FOR IMMEDIATE PAST 5 FISCAL YEARS - Direct and Indirect Expenses

Fiscal Year	Instruction	Academic Support	Student Services	Services of Educational Activity				Un-sponsored Student Aid	Sponsored Student Aid	Sponsored Research	Other Sponsored Activity	Ext & Public Service	TOTAL DIRECT EXPENSES
				Teaching Hospital	Diagnostic Lab	Other							
						Amount	Type						
2006	\$17,363,900	\$8,359,947	\$296,850	\$13,754,541	-	\$982,298	-	\$456,232	\$276,953	\$12,391,995	\$2,349,646	\$463,718	\$56,696,079
2005	\$17,022,598	\$8,432,060	\$266,053	\$12,917,823	-	\$717,514	-	\$435,077	\$139,001	\$10,655,075	\$2,498,105	\$286,065	\$53,369,371
2004	\$15,104,378	\$7,977,246	\$257,866	\$10,490,171	-	\$511,473	-	\$508,448	\$238,834	\$11,053,629	\$2,102,821	\$261,976	\$48,506,842
2003	\$16,233,695	\$5,799,403	\$220,403	\$9,270,986	-	\$735,098	-	\$437,381	\$214,897	\$11,202,927	\$2,518,573	\$163,698	\$46,797,061
2002	\$16,221,542	\$5,688,337	\$203,661	\$9,108,746	-	\$734,696	-	\$425,281	\$186,959	\$10,139,250	\$2,261,236	\$29,588	\$44,999,297
% Change	7.04%	46.97%	45.76%	51.00%	-	33.70%	-	7.28%	48.14%	22.22%	3.91%	1467.25%	25.99%

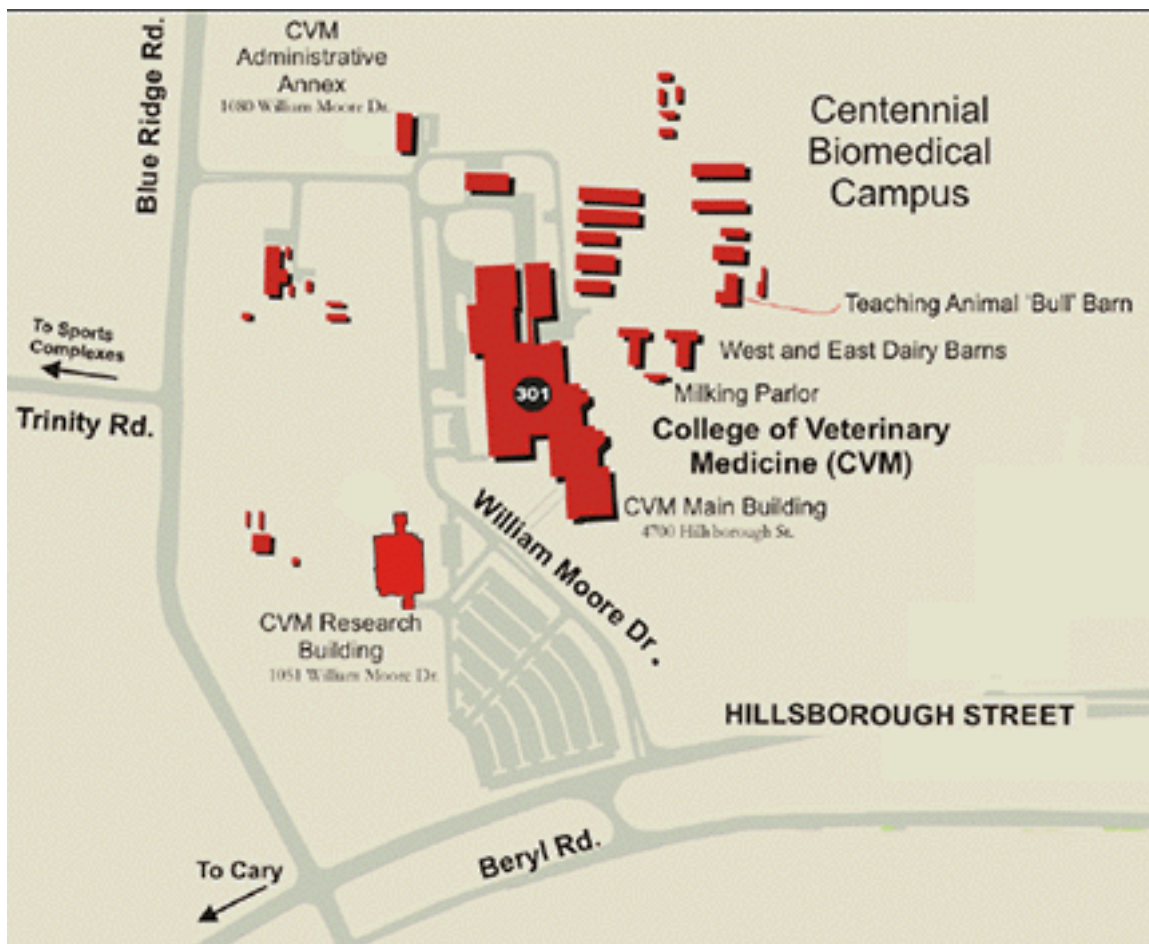
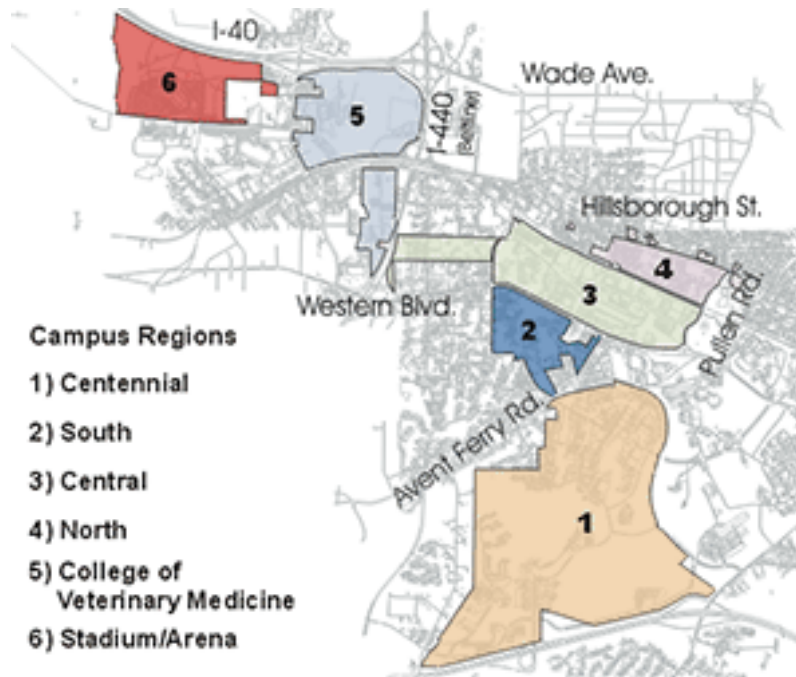
TABLE B - COLLEGE REVENUE (Sources of funds) - FROM ALL SOURCES FOR IMMEDIATE PAST 5 FISCAL YEARS

Fiscal Year	State Appropriations	Tuition & Fees	Is Tuition Estimated Amount?	Endowment Income (current year)	Gifts for Current Use	Sponsored Program Income /Cost Recovery	Other	SALES and SERVICES			Reserves and Transfers	TOTAL REVENUE
								Teaching Hospital	Diagnostic Lab	Other Sources from Sales & Services		
2006	\$27,597,889	-	-	\$536,857	\$3,736,920	\$12,441,541	\$2,094,354	\$13,339,818	-	\$1,403,693	\$3,104,621	\$64,255,693
2005	\$27,393,226	-	-	\$475,047	\$3,418,326	\$11,099,559	\$1,008,090	\$11,212,242	-	\$1,503,569	\$4,014,327	\$60,124,386
2004	\$25,074,586	-	-	\$399,611	\$1,903,239	\$10,880,981	\$1,590,881	\$9,191,514	-	\$1,638,326	\$4,073,434	\$54,752,572
2003	\$24,663,352	-	-	\$263,246	\$1,987,584	\$11,002,246	\$1,473,286	\$8,513,439	-	\$1,290,113	\$3,177,897	\$52,371,163
2002	\$24,785,305	-	-	(\$589,571)	\$1,449,580	\$9,948,898	\$1,083,577	\$8,379,331	-	\$1,430,757	\$1,782,824	\$48,270,701
% Change	11.35%	-	-	-191.06%	157.79%	25.05%	93.28%	59.20%	-	-1.89%	74.14%	33.12%

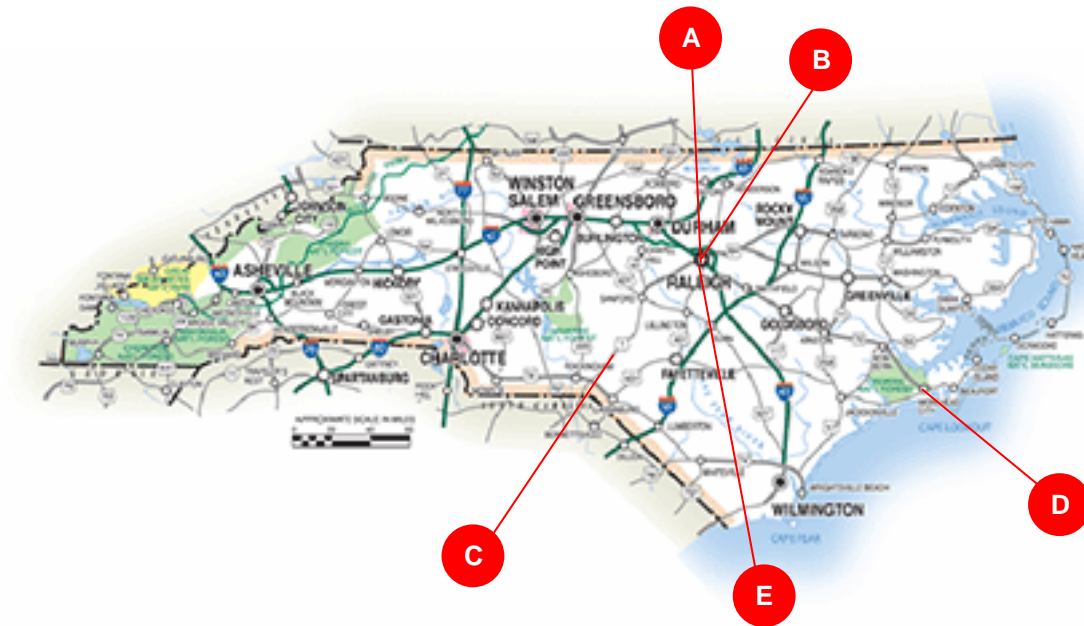
APPENDIX 2-2: TREND ANALYSIS OF COLLEGE REVENUES



APPENDIX 3-1: LOCATION OF THE COLLEGE OF VETERINARY MEDICINE ON THE NCSU CAMPUS



**APPENDIX 3-2: LOCATION OF ON- AND OFF- CAMPUS FACILITIES OF
THE COLLEGE OF VETERINARY MEDICINE**



- A. CVM Main Campus
*4700 Hillsborough Street
Raleigh, NC 27606*
- B. Wake County Animal Care, Control and Adoption Center
*820 Beacon Lake Road
Raleigh, NC 27610*
- C. Equine Health Center at Southern Pines (EHC-SP)
*6045 US Highway #1 North
Southern Pines, NC 28387*
- D. Center for Marine Sciences and Technology (CMAST)
*303 College Circle
Morehead City, NC 28557*
- E. University Field Laboratories
*Located throughout the state,
Most commonly used site is on
Lake Wheeler Road
Raleigh, NC*

APPENDIX 4-1: CLINICAL RESOURCES - Tables A, B, & C

Table A - Teaching Hospital (Corresponds with AAVMC Survey 22)			
2005-2006			
Animal Species	No. of Patient Visits	No. Hospitalized	No. of Hospital Days
Bovine	88	32	127
Canine	13635	2969	11962
Caprine	52	27	117
Equine	2506	1211	8555
Feline	2772	712	2931
Ovine	11	8	28
Porcine	14	5	43
Caged Pet Birds	7	3	12
Caged Pet Mammals	57	17	118
Avian Wildlife	0	0	0
Other	138	74	354
Total	19280	5058	24247

No. of Patient Visits - total number of times the patient visits the hospital (if Buffy visits the hospital 3 times this year, this would count as 3 visits.)

No. Hospitalized - number of patients that were hospitalized.

No. of Hospital Days - cumulative days that the total number of patients were hospitalized.

Table A - Teaching Hospital			
2004-2005			
Animal Species	No. of Patient Visits	No. Hospitalized	No. of Hospital Days
Bovine	42	17	69
Canine	12662	2707	10971
Caprine	30	16	63
Equine	2367	1070	7138
Feline	2443	577	2479
Ovine	5	2	6
Porcine	12	7	98
Caged Pet Birds	22	2	5
Caged Pet Mammals	18	5	19
Avian Wildlife	0	0	0
Other	157	68	242
Total	17758	4471	21090

Table A - Teaching Hospital			
2003-2004			
Animal Species	No. of Patient Visits	No. Hospitalized	No. of Hospital Days
Bovine	104	35	154
Canine	11990	2387	10469
Caprine	31	17	101
Equine	2044	998	6914
Feline	2323	549	2460
Ovine	8	3	15
Porcine	4	3	12
Caged Pet Birds	208	38	127
Caged Pet Mammals	14	6	19
Avian Wildlife	0	0	0
Other	167	67	165
Total	16893	4103	20436

Table A - Teaching Hospital			
2002-2003			
Animal Species	No. of Patient Visits	No. Hospitalized	No. of Hospital Days
Bovine	146	70	194
Canine	12228	2337	5359
Caprine	48	19	62
Equine	1853	908	5121
Feline	2574	485	1021
Ovine	5	4	13
Porcine	21	4	13
Caged Pet Birds	406	59	148
Caged Pet Mammals	160	18	51
Avian Wildlife	0	0	0
Other	16	4	15
Total	17457	3908	11997

Table A - Teaching Hospital			
2001-2002			
Animal Species	No. of Patient Visits	No. Hospitalized	No. of Hospital Days
Bovine	120	42	123
Canine	12002	2311	5745
Caprine	33	8	18
Equine	2051	1026	6155
Feline	2434	386	1040
Ovine	8	1	2
Porcine	9	5	12
Caged Pet Birds	373	46	148
Caged Pet Mammals	141	27	87
Avian Wildlife	0	0	0
Other	31	13	52
Total	17202	3865	13382

Table B - Ambulatory/Field Service Program (Corresponds with AAVMC Survey 23)		
2005-2006		
Animal Species	# of Farm (site) Calls	# of Animals Examined/Treated
Bovine	289	10604
Caprine	65	814
Equine	86	435
Ovine	14	577
Porcine	19	102879*
Other	240	1822355*
Totals	713	1937664

Number of Farm (site) Calls - total number of calls/visits made to farm/operations.

Number of Animals Examined/Treated - number of individual animals examined/treated.

*Indicates number of "at risk" swine and poultry examined.

Table B - Ambulatory/Field Service Program		
2004-2005		
Animal Species	# of Farm (site) Calls	# of Animals Examined/Treated
Bovine	282	9795
Caprine	71	287
Equine	86	441
Ovine	18	6
Porcine	7	4000
Other	144	3514
Totals	608	18043

Table B - Ambulatory/Field Service Program		
2003-2004		
Animal Species	# of Farm (site) Calls	# of Animals Examined/Treated
Bovine	287	7792
Caprine	75	315
Equine	153	218
Ovine	11	35
Porcine	23	222
Other	127	103
Totals	676	8685

Table B - Ambulatory/Field Service Program		
2002-2003		
Animal Species	# of Farm (site) Calls	# of Animals Examined/Treated
Bovine	223	9748
Caprine	36	467
Equine	85	578
Ovine	22	508
Porcine	1	100
Other	87	93566
Totals	454	104967

Table B - Ambulatory/Field Service Program		
2001-2002		
Animal Species	# of Farm (site) Calls	# of Animals Examined/Treated
Bovine	199	11933
Caprine	35	742
Equine	75	388
Ovine	4	64
Porcine	3	6
Other	49	341
Totals	365	13474

Table C - Herd/Flock Health Program (Corresponds with AAVMC Survey 24)				
2001-2002				
	Herd/Flock health programs provided within your institution (Please answer yes or no)		Herd/Flock health programs provided through off-campus programs (Please answer yes or no)	
	Yes or No	# of sites	Yes or No	# of sites
Dairy	Y	2	Y	10
Beef Feedlots	N	0	Y	2
Cow-Calf	Y	2	Y	35
Small Ruminants	Y	3	Y	14
Swine	Y	2	Y	50
Poultry	Y	2	Y	30
Fish	N	N/A	Y	1
Equine	Y	1	N	N/A
Other	N	N/A	N	N/A

Table C - Herd/Flock Health Program				
2002-2003				
	Herd/Flock health programs provided within your institution (Please answer yes or no)		Herd/Flock health programs provided through off-campus programs (Please answer yes or no)	
	Yes or No	# of sites	Yes or No	# of sites
Dairy	Y	2	Y	10
Beef Feedlots	N	0	Y	2
Cow-Calf	Y	2	Y	25
Small Ruminants	Y	3	Y	12
Swine	Y	2	Y	50
Poultry	Y	2	Y	25
Fish	N	N/A	Y	1
Equine	Y	1	N	N/A
Other	N	N/A	N	N/A

Table C - Herd/Flock Health Program				
2003-2004				
	Herd/Flock health programs provided within your institution (Please answer yes or no)		Herd/Flock health programs provided through off-campus programs (Please answer yes or no)	
	Yes or No	# of sites	Yes or No	# of sites
Dairy	Y	2	Y	10
Beef Feedlots	N	0	Y	2
Cow-Calf	Y	2	Y	20
Small Ruminants	Y	3	Y	14
Swine	Y	2	Y	50
Poultry	Y	2	Y	30
Fish	N	N/A	Y	1
Equine	Y	1	N	N/A
Other	N	N/A	N	N/A

Table C - Herd/Flock Health Program				
2004-2005				
	Herd/Flock health programs provided within your institution (Please answer yes or no)		Herd/Flock health programs provided through off-campus programs (Please answer yes or no)	
	Yes or No	# of sites	Yes or No	# of sites
Dairy	Y	2	Y	10
Beef Feedlots	N	0	Y	2
Cow-Calf	Y	2	Y	20
Small Ruminants	Y	3	Y	10
Swine	Y	2	Y	50
Poultry	Y	2	Y	10
Fish	N	N/A	Y	1
Equine	Y	1	N	N/A
Other	N	N/A	N	N/A

Table C - Herd/Flock Health Program				
2005-2006				
	Herd/Flock health programs provided within your institution (Please answer yes or no)		Herd/Flock health programs provided through off-campus programs (Please answer yes or no)	
	Yes or No	# of sites	Yes or No	# of sites
Dairy	Y	2	Y	15
Beef Feedlots	N	0	Y	2
Cow-Calf	Y	2	Y	3
Small Ruminants	Y	3	Y	6
Swine	Y	2	Y	70
Poultry	Y	2	Y	111
Fish	N	N/A	Y	1
Equine	Y	1	N	N/A
Other	N	N/A	N	1

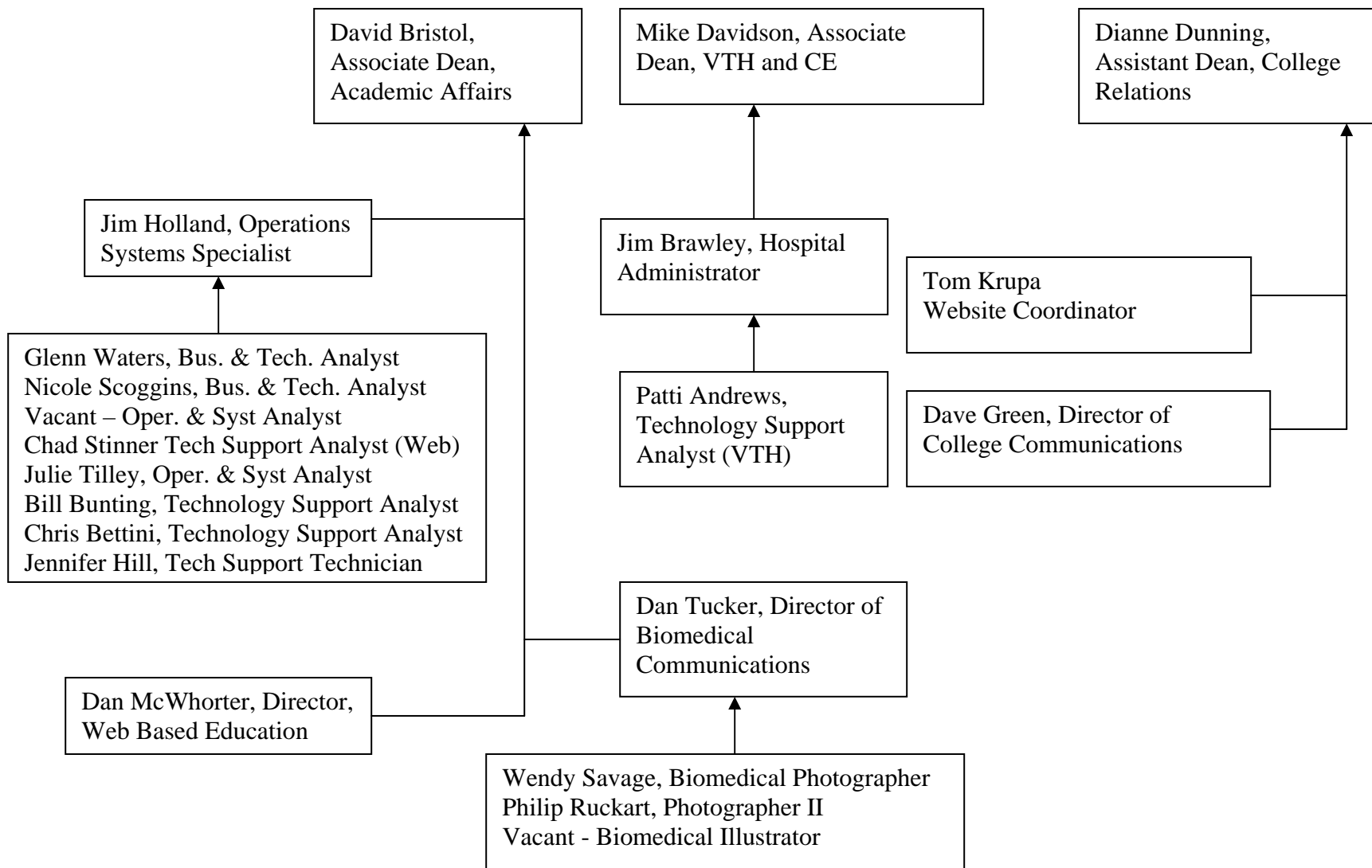
APPENDIX 4-2: CLINICAL RESOURCES - TREND ANALYSIS

Clinical Caseload Trends 2001-2006					
Species	% change over last five years	% change 05-06 vs 04-05	% change 04-05 vs 03-04	% change 03-04 vs 02-03	% change 02-03 vs 01-02
Bovine	-26.6%	-0.1%	-59.6%	-28.8%	+16.6%
Canine	+13.6%	+29.2%	+5.6%	-1.9%	+1.9%
Caprine	+57.6%	+73.3%	-3.2%	+9.4%	+45.5%
Equine	+22.2%	+17.1%	+18.7%	+17.5%	-9.7%
Feline	+13.9%	+13.5%	+5.2%	-9.8%	+5.8%
Ovine	+17.2%	+120.0%	+23.5%	+200.0%	-37.5%
Porcine	+55.5%	+16.6%	+200.0%	-81.0%	+133.3%
Pet birds	-98.4%	-68.2%	-89.4%	-48.8%	+8.8%
Pet mammals	-59.6%	+68.4%	+28.6%	-91.3%	+13.5%
Avian wildlife	N/A	N/A	N/A	N/A	N/A
Other	+345.2%	-12.1%	-6.0%	+943.7%	-48.4%
Total	+12.1%	+5.4%	+11.2%	-3.2%	+1.5%

Ambulatory and Field Services Caseload Trends 2001-2006					
Species	% change over last five years	% change 05-06 vs 04-05	% change 04-05 vs 03-04	% change 03-04 vs 02-03	% change 02-03 vs 01-02
Bovine	-11.3%	+8.3%	+17.2%	-14.3%	-18.3%
Caprine	+9.7%	+183.6%	-12.0%	-42.4%	-37.1%
Equine	+15.4%	-1.4%	+87.2%	-65.8%	+49.0%
Ovine	+477.0%	+9516.0%	-483.3%	-65.0%	+694.0%
Porcine*	N/A	N/A	N/A	N/A	N/A
Other*	N/A	N/A	N/A	N/A	N/A

*Due to a change in the documentation of swine and poultry field service visits, and number of “at risk” animals in 2005, direct comparisons between years are not possible. See Appendix 4-1 Table B for caseload numbers.

APPENDIX 5-1: BIOMEDICAL COMMUNICATIONS, WEBSITE AND INFORMATION TECHNOLOGY SUPPORT



APPENDIX 6-1: STUDENTS - TABLES A, B, C & D

Table A: Veterinary Medical Program

Veterinary Students	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Year 1	76	76	80	76	78
Year 2	76	77	78	75	77
Year 3	73	77	73	75	74
Year 4	75	73	76	73	75
Graduated	75	73	76	73	75

Table B: Interns, Residents, and Combined Residency-Graduate Programs

Academic Year	Interns	Residents	Residents-MS*	Residents-PhD*
2001-2002	8	12	20	5
2002-2003	8	21	11	5
2003-2004	8	30	5	6
2004-2005	8	32	5	7
2005-2006	9	37	4	7

*Combined residency-graduate students are also counted in Table C: Graduate Students.

Table C: Graduate Students

Academic Year	MS				PhD			
	Total	Minority	Minority %	Degrees Awarded	Total	Minority	Minority %	Degrees Awarded
2001-2002	36	11	31%	10	73	30	41%	15
2002-2003	24	5	21%	9	70	33	47%	14
2003-2004	14	3	21%	8	72	34	47%	11
2004-2005	15	4	27%	1	72	29	40%	5
2005-2006	16	6	38%	6	63	29	46%	15

Table D: Other Educational Programs

Number Enrolled, September of Academic Year	ECFVG Clinical Year	Foreign Seniors	Veterinary Technician Program	Undergraduate Programs	Other
2001-2002	0	14	0	0	0
2002-2003	0	12	0	0	0
2003-2004	0	11	0	0	0
2004-2005	0	18	0	0	0
2005-2006	0	15	0	0	0

APPENDIX 6-2: CVM STUDENT CLUBS AND ORGANIZATIONS

Veterinary Behavior Club
Christian Veterinary Fellowship
Invertebrate Animal Medicine Club
International Veterinary Students' Association (IVSA)
Pathheads (Pathology Club)
Radvets (Radiology Club)
Student Chapter of the American Association of Bovine Practitioners (SCAABP)
Student Chapter of the American Association of Swine Veterinarians (SCAASV)
Student Chapter of the American Association of Equine Practitioners (SCAAEP)
Student Chapter of the American Association of Feline Practitioners (SCAAFP)
Student Chapter of the American Association of Small Ruminant Practitioners (SCAASRP)
Student Chapter of the American Animal Hospital Association (SCAAHA)
Student Chapter of the American Association of Avian Pathologists (SCAAAP – Poultry Club)
Student Veterinary Emergency and Critical Care Society (SVECCS)
Veterinary Business Management Association (VMBA)
Holistic Veterinary Medicine Club
Theriogenology Club
Veterinary Educational Textbooks and Supplies (VETS)
Lab Animal
Pain Management
Wildlife, Avian, Aquatic and Zoo Medicine Club (WAAZM)
Student American Veterinary Medical Association (SAVMA)
Student Chapter of the American Veterinary Medical Association (SCAVMA)
Student Chapter of the International Veterinary Academy of Pain Management (SCIVAPM)

SCAVMA coordinates meetings of the various clubs so they do not overlap. Clubs meet 2-3 times per semester.

APPENDIX 6-3: ORIENTATION SCHEDULE FOR FIRST AND FOURTH YEAR STUDENTS

First Year Orientation Agenda, Class of 2010, August 7-12, 2006

Monday, August 7

Green Commons & South Theater

8:00	Continental Breakfast - sponsored by CVM & Purina
8:30	Welcome – Dr. Arden
8:45	Introductions – Dr. Bristol (faculty, staff and students) note: Dept. Heads call their faculty to the front of the room to introduce.
9:15	Break
9:30	Eleanor Stell (orientation agenda)
9:45	Dr. Bristol (safety memo, electing class officers, rabies form, cell phones, handbook)
10:15	Dr. Carl Williams (Environmental Health – Rabies)
10:45	Dr. Bengston (Student Health Services)
11:15	Dan McWhorter - PDA contract
11:30	SCAVMA – Jeff Broadaway, President; Bryna Riley – SAVMA Symposium
11:45	VETS - Nikki Hladio - Purina – AKC - Class officer presentations – Bo Bergman
12:15	Lunch
	PDA's – Dan McWhorter – Blue Commons
	All campus cards and security badges - BMC
	Composite pictures proceed to BMC
	Lockers - Phyllis
2:00-3:30	Dr. Mark Green – Veterinary Profession
3:30 – 5:30	Handling surgical instruments (South Theater) -- Dr. Lizette Hardie

Tuesday, August 8

South Theater

8:00 – 3:00	Personal Finance For Veterinary Students – Fritz Wood & Dr. Charles Wayner
	Lunch sponsored by Hills
3:15 – 4:00	Communication in Veterinary Medicine – Drs. Williams & Gerard
4:00 – 4:30	Sexual Harassment – Amy Circosta – Office of Equal Opportunity

Wednesday, August 9

8:00–12:30	Outdoor Learning Laboratory (Harrill Center - State Fair Grounds)
12:30 – 2:30	Lunch
2:30 – 3:00	Laura Osegueda – Library information (North Theater)
3:00 - 5:00.	White Coat fitting – FAS curriculum planning (North Theater & Lab)

*NOTE: For Food Animal Scholars Only. You will be fitted first. Immediately following your White Coat Fitting, your attendance is mandatory at your Curriculum Planning Session.

Thursday, August 10

South Theater

8:00 - 11:30	Understanding Self – MBTI; Eleanor Stell and Dr. Rhonda Sutton
11:30- 12:00	Emotional Intelligence – EQI; Eleanor Stell and Dr. Rhonda Sutton
12:00– 1:00	Lunch
1:00 – 2:00	Dr. Bernie Hansen – Advanced Medical Information Searches
2:00 – 2:45	Dr. Dennis Wages – Wellness Committee
2:45 – 3:00	Pam Gerace – Legal Affairs
3:00 – 3:15	Jon Barnwell – Public Safety

3:15 – 4:00 Dr. Hardie – Focus Areas
4:00 – 5:00 Dr. Sutton – Counseling, Student Services – Financial Aid, Mentors, Selectives

Friday, August 11

A.M - North Theater , P.M. - Career Presentations & Career Fair

8:00-9:00 Optional Sr. Clinical Conference
9:00-11:30 Computing@CVM & PDA's Dan McWhorter
11:30-11:45 Infectious Disease exam information
11:45 – 12:00 Dr. Arasu – International Travels
12:00-1:00 Lunch provided by NCVMA
1:00-1:30 Career Presentations
1:30-3:30 Career Fair begins
3:30 Tours given by DVM students

**Orientation for New Seniors - May 2006
(Class of 2007)**

Monday, May 8

8:00 – 8:15 Welcome – Dr. Bristol
8:15 – 9:15 Introduction to clinics by Dr. Davidson
9:15 – 9:30 Break and group A to computer lab, C-260 all other students to clinic for shadowing
9:30 – 12:00 Group A for UVIS training, C-260, computer lab all other students to clinic for shadowing
12:00 – 1:00 Lunch
1:00 – 3:30 Group B for UVIS training, C-260, computer lab all other students to clinic for shadowing

Tuesday, May 9

8:00 – 10:30 Group C for UVIS training, C-260, computer lab all other students to clinic for shadowing
12:00 – 1:00 Lunch
1:00 – 3:30 Group D for UVIS training, C-260, computer lab all other students to clinic for shadowing

Wednesday, May 10

8:00 – 10:30 Group E for UVIS training in C-260, computer lab all other students to clinic for shadowing
10:30 – 10:45 Break (all students from Group E and clinics to B-112)
10:45 – 11:15 Dr. DeFrancesco
11:15 – 11:30 Dr. Ian Robertson – Overview of RIS
11:30 – 11:45 Dr. Levine – Infectious Disease Committee
11:45 – 12:15 PDA resources with Dan McWhorter
12:15 – 1:00 Lunch
1:00 Report to clinics for your first rotation selection

APPENDIX 7-1: ADMISSIONS - TABLE A

Year	Class	State Residents		Non-residents		Contract Students		Total	
		A/P	O/A	A/P	O/A	A/P	O/A	A/P	O/A
2001-2002	2006	169/62	64/62	251/14	28/14	N/A	N/A	420/76	90/76
2002-2003	2007	200/62	65/62	315/14	26/18	N/A	N/A	515/76	88/80
2003-2004	2008	173/62	69/62	341/14	19/14	N/A	N/A	514/76	81/76
2004-2005	2009	194/62	69/62	370/14	20/14	N/A	N/A	564/76	82/76
2005-2006	2010	220/62	65/62	380/14	25/14	N/A	N/A	600/76	87/76

A/P - Applications/Positions
O/A - Offers/Acceptances

APPENDIX 8-1: FACULTY - TABLES A, B, C & D

Table A - Loss and Recruitment of Faculty (2000-2005)

Dept.	Faculty Lost (#)	Discipline/Specialty	Recruited (#)	Year
DOCS		Community Practice	1	2000
DOCS		Dermatology	1	2000
DOCS		Laboratory Animal	1	2001
DOCS		Neurology	1	2001
DOCS		Equine	1	2001
DOCS		Equine Surgery	1	2002
DOCS		Oncology	1	2002
DOCS		Laboratory Animal	1	2002
DOCS		Neurology	1	2002
DOCS		Small Animal Internal Medicine	1	2002
DOCS		Small Animal Surgery	1	2002
DOCS		Ophthalmology	1	2003
DOCS		Equine Surgery	2	2004
DOCS	1	Oncology		2004
DOCS	2	Small Animal Internal Medicine	2	2004
DOCS		Animal Welfare	1	2005
DOCS		Behavior	1	2005
DOCS	1	Dermatology		2005
DOCS		Emergency/Critical Care	1	2005
DOCS		Oncology	2	2005
DOCS	1	Neurology		2005
DOCS		Infectious Disease	1	2005
MBS	1	Cell Biology	1	2002
MBS	1	Embryology		2002
MBS		Genomics	2	2002
MBS	1	Physiology		2002
MBS	2	Anesthesiology	1	2003
MBS	1	Radiology		2003
MBS		Anesthesiology	1	2004
MBS	1	Clinical Pathology		2004
MBS		Developmental Biology	1	2004
MBS	1	Immunology	1	2004
MBS		Infectious Disease/Immunology	1	2004
MBS		Radiology	1	2004
MBS	1	Anesthesiology	2	2005
MBS	1	Cell Biology		2005
MBS	1	Developmental Biology		2005
MBS		Infectious Disease	1	2005
PHP	1	Ruminant Health Management		2001
PHP	1	Epidemiology & Environmental Health		2002

PHP	1	Immunology		2002
PHP		Swine Health & Production	1	2002
PHP	1	Teaching Animal Unit/ Theriogenology		2002
PHP	1	Theriogenology		2002
PHP		Pharmacology & Risk Mgmt	1	2003
PHP	1	Ruminant Health Management	1	2003
PHP	1	Theriogenology	1	2003
PHP		Ruminant Health Management	1	2004
PHP		Theriogenology	1	2004
PHP	2	Poultry Health Management		2005
PHP	1	Ruminant Health Management		2005

Table B: Staff support for teaching and research

Area	FTE Clerical	FTE Technical	Other
Clinical Teaching	2	10 PHP see VTH data for MBS & DOCS	0
Non-Clinical Teaching	4	4	0
Research	11	61	0

Table C: Non-Veterinarians

Title	MS	PhD	Board Certified	Board Certified & MS	Board Certified & PhD
Administrator	2	1	0	0	0
Professor	0	11	0	0	0
Associate Professor	0	7	0	0	0
Assistant Professor	1	10	0	0	0

Table D: Veterinarians

Title	DVM (only)	MS	PhD	Board Certified	Board Certified & MS	Board Certified & PhD
Administrator	0	0	0	2	1	3
Professor	0	2	7	5	7	15
Associate Professor	0	2	6	4	7	14
Assistant Professor	6	1	0	9	6	12

APPENDIX 9-1: OVERVIEW OF THE CURRICULUM - See attached electronic document for an overview of the curriculum.

APPENDIX 9-2: AUDIT OF SELECTED CURRICULAR CONTENT

	Course # / Hours	Course # / Hours	Course # / Hours
CLINICAL REASONING AND PROBLEM SOLVING	VMP 912/12 hours	VMC 976/56 hours	VMC 971/40 hours
CRITICAL PATIENT CARE			
Intensive Care and Emergency Medicine	VMC 979/20 hours	VMC 960/96 hours	VMC 966/30 hours
Pain Management	VMB 930/6 hours	VMB 977 80 hours	VMC 979/5 hours
Principles and Hospital Practice for Isolation of Infectious Diseases	VMP 914 / 8 hours	VMP 924/3 hours	VMC 979/5 hours
INFORMATION MANAGEMENT AND THE MEDICAL RECORD			
Herd Health	VMP 916/23 hours	VMP 936/18 hours	VMP 970/40 hours
Individual Animals	VMC 979/40 hours	VMC 971/20-30 hours	VMP 970/20 hours
HUMAN ANIMAL BOND			
Behavior	VMC 927/26 hours	VMC 971/2 hours	VMC 979/6 hours
Animal Welfare	VMC 962/8 hours (ethics of welfare issues)	VMC 970/ 3 hours	VMP 970/40 hours
Euthanasia and Grief Counseling	VMC 962/1hour	VMC 980/ 8 hours	VMC 971/2 hours
EPIDEMIOLOGY AND ZOOSES			
Regulatory Principles	VMP 945/ 7 hours	VMP 970/8 hours	VMP 958/2 hours
Epidemiology	VMP 945/16 hours	VMP 970/20 hours	VMC 970/5 hours
Animals and the Environment	VMP 945/3 hours	VMP 958/2 hours	VMP 970/10 hours
Zoonoses	VMP 945/7 hours	VMP 924/5 hours	VMP 970/2 hours
Food Safety	VMP 945/4 hours	VMP 958/6 hours	VMP 970/16 hours
Foreign Animal Disease	VMP 945/2 hours	VMP 958/15 hours	VMP 924/10 hours
MOLECULAR AND CELL BIOLOGY	VMB 922/4 hours	VMP 924/3 hours	
PROFESSIONAL DEVELOPMENT			
Career Knowledge/Options	VMC 910/12 hours	VMC 992V/ 8 hours	
Attributes and Worth of a Professional	VMC 992V/8 hours	VMC 962/3 hours	VMC 910/12 hours
Ethics	VMC 962/12 hours (includes welfare issues)	VMC 992V/16 hours	VMC 970/ 3 hours
Communication	VMC 962/8 hours	VMC 991I/30 hours	VMC 992V/4 hours
Business and Practice Management	VMC 962/2 hours	VMC 992V/40 hours	VMP 991A
CLINICAL TECHNIQUES AND SKILLS			
History and Physical Exam	VMP 956/42 hours	VMC 937/30 hours	VMC 971/30-40 hours
Hands-on Clinical Procedures (catheter placement, nasogastric intubation)	VMP 956/42 hours	VMC 960/48 hours	VMC 970/45 hours

APPENDIX 10-1: RESEARCH ACTIVITIES OF THE COLLEGE OF VETERINARY MEDICINE

Faculty Members Involved in Research - By Department

DOCS - Department of Clinical Sciences MBS - Molecular Biomedical Sciences PHP - Population Health and Pathobiology

	Department	Total # Faculty	# Involved in Research	# Teach in DVM curriculum	Total Dept Salary*	Total Salary Savings	% Salary recovered	Extramurally Sponsored Research Grants		# Peer-reviewed Research Publications
								Number	Value (\$)	
2003	DOCS	52	37	49	4,291,500	174,986	4.08	64	2,266,231	88
	MBS	31	29	26	3,395,716	397,236	11.7	34	5,056,951	50
	PHP	47	39	47	4,090,221	316,952	7.76	35	2,795,568	105
	Totals	130	105	122	11,777,437	889,174		133	10,118,750	243
2004	DOCS	51	40	49	4,272,218	149,377	3.5	54	2,732,410	80
	MBS	37	31	29	3,391,652	523,615	15.44	42	7,458,846	60
	PHP	49	40	49	4,317,368	309,612	7.17	33	4,656,255	120
	Totals	137	111	127	11,981,238	982,604		129	14,847,511	260
2005	DOCS	55	40	53	4,579,170	150,982	3.3	51	3,496,367	110
	MBS	39	32	32	3,419,383	585,631	17.13	27	4,349,953	59
	PHP	48	40	48	4,435,524	389,726	8.79	33	2,141,186	133
	Totals	142	112	133	12,434,077	1,126,339		111	9,987,506	302

*Includes fringe benefits.

APPENDIX 10-2: OTHER MEASURES OF FACULTY RESEARCH ACTIVITY

Faculty Involvement - By Department

DOCS - Department of Clinical Sciences MBS - Molecular Biomedical Sciences PHP - Population Health and Pathobiology

	Department	Papers presented at meetings	Faculty on Research Panels			Faculty holding officer positions in scientific organizations			Faculty on Editorial Boards	Invited Research Presentations
			NC	National	International	NC	National	International		
2003	DOCS	79	0	5	3	1	2	1	7	259
	MBS	61	0	9	4	1	3	2	11	74
	PHP	91	3	15	1	7	3	2	10	91
	Totals	231	3	29	8	9	8	5	28	424
2004	DOCS	86	0	4	1	0	3	6	8	316
	MBS	66	0	9	3	1	2	3	9	69
	PHP	112	2	15	2	6	4	1	9	112
	Totals	264	2	28	6	7	9	10	26	497
2005	DOCS	100	0	1	1	0	6	6	11	320
	MBS	52	1	11	3	1	5	3	10	101
	PHP	103	2	15	1	6	3	2	12	103
	Totals	255	3	27	5	7	14	11	33	524

See Appendix 11-6 for faculty research awards.

APPENDIX 11-1: 1999 ALUMNI SURVEY RESULTS

Highlights of the 1999 Alumni Survey (514 responses) (52.8% response rate)

Practice Type: Employment of male and female graduates in their first year after graduation and current employment

Type of Employment	Men		Women	
	First year	Current	First year	Current
Post graduate veterinary education	12.50%	2.80%	14.20%	5.64%
Post graduate non-veterinary education	0.69%	0.00%	1.58%	0.00%
Small Animal Practice	38.19%	41.96%	54.57%	58.93%
Mixed Animal Practice	26.39%	12.59%	19.24%	6.27%
Large Animal Practice	6.25%	4.20%	0.95%	0.63%
Equine Practice	3.47%	4.20%	1.89%	1.88%
Emergency Medicine	2.78%	1.40%	1.58%	1.25%
Government or Military	3.47%	9.09%	1.26%	2.51%
Academic Veterinary Medicine	0.00%	6.29%	0.00%	2.82%
Industry	1.39%	5.59%	0.63%	0.94%
Other	2.78%	4.90%	1.58%	8.46%
Relief work	0.00%	2.10%	1.58%	3.76%
Employed outside veterinary medicine	2.08%	4.90%	0.63%	3.76%
Unemployed	0.00%	0.00%	0.32%	3.13%

Success at obtaining post-veterinary training: Internships were sought by 17.7% of graduates, and of these, 78% were successful. Residencies were sought by 15.3% of graduates, and of these 87.3% were successful. Graduate training (Masters or Doctor of Philosophy programs) was sought out by 15.4% of alumni, and of those 84.1% were successful.

Species treated by alumni in clinical practice

		0%	1-15%	16-30%	31-45%	46-50%	51-65%	66-80%	81-100%
Small Animal	Men	42.8%	1.4%	1.4%	1.4%	2.1%	3.4%	5.5%	42.1%
	Women	29.1%	0.3%	0.3%	0.0%	1.2%	2.8%	4.0%	62.2%
Horses	Men	77.2%	7.6%	2.8%	4.1%	1.4%	0.0%	2.1%	4.8%
	Women	87.0%	7.7%	2.2%	0.0%	0.3%	0.0%	0.3%	2.5%
Cattle	Men	80.7%	11.0%	3.4%	2.1%	1.4%	0.0%	0.0%	1.4%
	Women	90.7%	6.8%	0.9%	0.0%	0.0%	0.6%	0.6%	0.3%
Swine	Men	91.0%	8.3%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%
	Women	96.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poultry	Men	96.6%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Women	98.5%	1.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%
Exotics	Men	69.0%	29.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.7%
	Women	56.0%	40.6%	1.2%	0.6%	0.0%	0.3%	0.0%	1.2%

Comments on education

- Top five most useful prerequisite courses: General Biology, Microbiology, English composition, Biochemistry, Animal Nutrition. Business courses were most often listed as the prerequisite that should be added.
- Courses that got too little emphasis in veterinary education: Introduction to PE skills, Principles of Surgery, Professional Development, Clinical Nutrition, Introduction to Clinical Practice
- Courses that got too much emphasis in veterinary education: Toxicology/Poisonous Plants, Parasitology, Embryology, Swine/Poultry Medicine, Public Health/Hygiene
- Top things that should have been covered, but weren't: Business management, Finance, Communication, Practical everyday applications, Clinical skills
- Top five things that they would change about their education: allow tracking, more clinical time/hands-on experience, more surgery, more everyday applications, more externships

APPENDIX 11-2: 2005 ALUMNI SURVEY RESULTS

Highlights of the 2005 Alumni Survey (60 responses, 42.3% response rate)

Practice Type: Employment of male and female graduates in their first year after graduation and current employment

Type of Employment	Class of 2000		Class of 2004	
	First year	Current	First year	Current
Clinical Practice	84%	62.5%	57.1%	50.0%
Academic Veterinary Medicine	4.0%	8.3%	21.4%	23.3%
Emergency Medicine	4.0%	4.2%	13.3%	13.3%
Relief Work	8.0%	8.3%	0	0
Government or Military Vet Med	0	4.2%	3.6%	3.3%
Corporate, nonclinical	3.6%	0	3.6%	3.3%
Other Setting in Vet Medicine	0	12.5%*	0	6.7%*

*Includes teaching vet tech program, PhD program, shelter medicine, rehab clinic

Average percent of clinical work devoted to specific species.

	Class of 2000	Class of 2004
Small Animal	80.1	76.0
Horses	11.0	6.0
Cattle	1.0	0.1
Small Ruminants	0.1	0.1
Camelids	3.5	0
Swine	0	0
Poultry	0	4.8
Exotics	7.8	7.8

Post-DVM Training	Class of 2000		Class of 2004	
	Sought	Success	Sought	Success
Internship	18.5%	100%	28%	100%
Residency	15.4%	74.6%	24.1%	100%
Graduate Training	0	0	11%	67.2%

Comments on Education

Knowledge and skills that served respondent best in first year after graduation (% of respondents)

	Class of 2000	Class of 2004
Communication	68.2	33.3
General Medical/Surgical Knowledge	40.9	33.3
Surgery Skills	18.2	33.3
Special areas/Species	27.3	16.7
Diagnostic Skills	0	16.7
Interpret Lab Results	0	16.7
Patience/Discipline Personal Qualities	13.6	0

Most important knowledge and skills learned in veterinary education (% of respondents)

	Class of 2000	Class of 2004
PE Skills	50	33.3
Surgery Skills	41.7	36.7
Communication Skills	25.0	43.3
General Medical Knowledge	20.8	13.3
Radiology	20.8	6.7
Problem solving	16.7	13.3
Clinical pathology	8.3	16.7

Area in which most poorly prepared (# of mentions)

	Class of 2000	Class of 2004
Surgery Skills	13	5
Business - Personnel Skills	7	5
Emergency	4	0
Dentistry	3	0
Routine Care	2	3
Endocrinology	2	0

Courses most helpful in work during the past year (% who selected course as 1 of 3 most helpful)

	Class of 2000	Class of 2004
Companion Animal Medicine 1/2	39.3	70
Clinical Pathology	28.6	39.3
Systemic Pathology	39.3	23.3
Radiology	42.9	23.3
Principles of Surgery	25	20

Courses that should be eliminated (# of mentions)

	Class of 2000	Class of 2004
Need tracking	7	0
Combine basic science courses	1	5

Courses that need to be added (# of mentions)

	Class of 2000	Class of 2004
Business	4	2
Surgery	3	0
Emergency	2	0

Should every veterinary student be required to work with all common species treated in practice? (% of respondents)

	Class of 2000	Class of 2004
YES	37.5	34.5
NO	62.5	65.5

Value of selectives in respondent's veterinary education (% of respondents)

	Class of 2000	Class of 2004
Extremely Valuable	72.7	69.0
Valuable	22.7	24.1
Neither/Not very valuable	4.6	6.9

Rating of quality of selected aspects of CVM (Excellent/Good/Average/Fair/Poor) (% of respondents)

Aspect	Class of 2000		Class of 2004	
	Poor/Fair	Good/Excellent	Poor/Fair	Good/Excellent
Course Content	0	96.2	0	82.7
Quality of Instructors	0	100	3.5	82.8
Instructors' Attitudes towards Students	11.6	69.2	3.5	79.3
Classroom Facilities	0	65.4	0	58.6
Laboratory Facilities	0	65.4	10.7	60.7
Library	8.3	70.8	6.7	75.8
Teaching Animal Unit	3.9	97.3	3.5	96.5
Hospital Facilities	3.9	73.1	3.5	82.8
Computer Facilities	3.9	42.3	27.5	41.4
Career Planning	30.8	26.9	37.9	13.8

Topics that should have been covered in respondent's veterinary education (% of respondents)

	Class of 2000	Class of 2004
Business/practice management/finance	42.9	34.4
Legal issues/documentation/regulations	25	6.3
Communications/Interactions with others	14.3	25.0
Surgery (more advanced)	17.9	6.3
Emergency/Critical Care Procedures	10.7	12.5
Specialty areas/Species	3.6	15.6
Hands on skills	0	18.8

Things respondent would change about his/her veterinary education (# of mentions)

	Class of 2000	Class of 2004
Allow tracking	11	7
Business Course	3	3
More Primary Care	4	6
More Surgery	5	2
More Hands-On Experience	4	1
Earlier Intro to Clinics	2	9
More Emergency	2	2

APPENDIX 11-3: SENIOR STUDENT EXIT SURVEY RESULTS

	2000	2001	2002	2003	2004	2005	2006	AVG
Response rate	91.8	97	58.7	63	74	54	42.6	68.73
Overall Evaluation:								
%3 or > (mean rating)	95.4(4.3)	93.7(4.4)	100(4.0)	98(4.2)	89(3.7)	100(4.2)	93(3.9)	95.5(4.1)
Quality of:	%3 or >	%3 or >	%3 or >	%3 or >	%3 or >	%3 or >	%3 or >	%3 or >
Year 1	80(3.2)	69(3.1)	86(3.5)	85(3.4)	66(2.9)	68(2.9)	65(2.2)	74.1(3)
Year 2	92(3.6)	91(3.7)	95(3.7)	96(3.8)	79(3.3)	95(3.8)	78(2.8)	89.4(3.5)
Year 3	82(3.4)	85(3.4)	95(3.7)	96(3.7)	91(3.7)	98(3.9)	78(3.0)	89.2(3.5)
Year 4	86(3.5)	96(4.1)	95(3.9)	93(4.1)	89(3.9)	98(4.3)	87(3.9)	92(3.9)
Selectives	97(4.2)	99(4.4)	93(4.1)	87(3.8)	82(3.5)	85(3.8)	65(2.6)	86.8(3.7)
TAU	88(3.6)	96(4.1)	89(3.9)	93(3.6)	95(4.3)	95(4.1)	87(3.4)	91.8(3.8)
Instruction	93(3.6)	94(3.9)	98(3.9)	100(4.0)	94(3.7)	100(4.2)	87(3.4)	95.1(3.8)
Facilities	81(3.4)	92(3.4)	88(3.3)	81(3.3)	81(3.4)	90(3.7)	68(2.6)	83(3.3)
THIS or UVIS	12(1.5)	26(2.0)	14(1.7)	21(2.0)	21(1.8)	32(2.1)	31(1.0)	22.4(1.7)
First Year Orientation	ND	ND	ND	60(2.7)	46(2.6)	68(2.8)	15(0.6)	27(1.2)
Interactions with:								
Faculty	94(3.6)	93(3.8)	98(4.0)	96(4.0)	91(3.8)	98(3.9)	71(2.8)	91(3.7)
Staff	92(3.8)	94(3.7)	98(4.0)	98(3.9)	89(3.7)	87(3.5)	71(2.8)	89.8(3.6)
Residents	88(3.6)	92(3.6)	95(3.9)	100(4.1)	94(4.1)	90(3.8)	87(3.5)	92.2(3.8)
Interns	88(3.5)	91(3.7)	91(3.9)	98(4.1)	95(4.2)	87(3.7)	87(3.4)	91(3.7)
Classmates	98(3.8)	96(4.2)	100(4.4)	98(4.1)	93(4.0)	95(4.3)	90(3.6)	95(4.0)
Other Students	89(3.5)	88(3.7)	98(3.8)	93(3.9)	96(3.9)	95(4.0)	81(3.1)	91(3.7)

Scale 1-5 (5=excellent, 4=very good, 3=good, 2=fair, 1=poor)

Comments from Senior Student Exit Surveys:

- 2003** **Best Experiences:** 4th year clinics (22 mentions), surgery/hands on experiences (7), selectives (5), externships (3)
Worst Experiences: Poor teacher/staff/student relations (10 mentions), Public Health/Epidemiology (6), Large Animal Weekend Treatment Crew (5), Amount of memorization (3)
- 2004** **Best experiences:** 4th year clinics (21 mentions), Mobile Surgery Unit/Community Classroom (10), TAU (7), externships (4), good faculty interactions (3)
Worst Experiences: Poor teacher/staff-student relations (9 mentions), 2nd year (3), Large Animal Treatment Crew (2), Radiology rotation (2), Soft tissue surgery rotation (2), UVIS (2)
- 2005** **Best Experiences:** 4th year clinics (20 mentions), mobile unit (9), classmates and friends (3), selectives (2), TAU (2), cardiology rotation (2), neurology rotation (2), travel opportunities (2)
Worst Experiences: Overnight call/ICU (8 mentions), Teacher/staff conflict (7), 2nd year schedule/stress (5), pathology class (3), UVIS (2), paperwork (2)
- 2006** **Best Experiences:** 4th year clinics (19 mentions), TAU (5), selectives (5), mobile unit (3), externships (2)
Worst Experiences: Radiology rotation (6 mentions), 2nd year schedule/stress (4), teacher/staff conflict (3), nutrition class (3), public health (2), paperwork (2), clinical pathology rotation (2), overnight call (2), UVIS (2)

APPENDIX 11-4: 2006 FACULTY AND HOUSE OFFICER SURVEY RESULTS

Highlights of the 2006 Faculty and House Officer Survey (82 Respondents, 44% response rate, 74.1% Faculty, 24.6% House Officers, 48.8% have taught here > 10 years, 43.9% have taught here < 5 years)

Faculty that teach in a particular year of the curriculum were asked to rate the overall preparedness of students entering their class:

Year	Overall Preparedness			Specific areas in which students are not well prepared?		
	Not adequate	Adequate	Very well	Yes	No	Areas of concern
1	13%	74%	13%	40%	60%	study skills, language basis for medical terminology, basic biology, and animal science knowledge
2	7%	82%	11%	32%	68%	basic knowledge and animal science knowledge
3	11%	78%	11%	44%	56%	basic pathology and pathophysiology, medical vocabulary, and animal science knowledge
4	11%	78%	11%	59%	41%	problem identification, problem solving, knowledge and use of physiology and pathophysiology

When asked to rate overall facilities and equipment, 95% of the faculty rated them as adequate or excellent. Faculty were also asked to rate the quality of specific facilities equipment and that they use:

	Not adequate	Adequate	Excellent
Lecture spaces	12%	58%	30%
Seminar rooms	10%	77%	13%
Teaching laboratory spaces	14%	65%	21%
Clinical rounds rooms	27%	57%	16%
Equipment available for teaching	6%	66%	28%
Best aspects of facilities and equipment: Audiovisual upgrades in many teaching rooms, the two amphitheaters, the Teaching Animal Unit, the radiology facilities, and the layout of the live animal teaching laboratory.			
Areas of concern: Limited space for live animal laboratories, the D-239 lecture room, temperature control in the building and teaching spaces, projection quality in the theaters (especially radiographic image quality), the number of small seminar rooms available, the availability of microscopes, and the size of some clinical rounds rooms.			
Improvement priorities: Number one comment - more space. Other comments mentioned most often were increase the number of seminar rooms (teaching rooms for small groups), replace D-239 with a theater, standardize computer and audiovisual equipment between rooms, improve wireless access, improve temperature control and replace the ceiling missing due to work on HVAC system.			

When asked to rate the overall library and information resources, 97% of the faculty rated them as adequate or excellent. Faculty were also asked to rate the quality of specific components of library and information resources:

	Not adequate	Adequate	Excellent
Access to online journals and other information sources	13%	40%	47%
Access to print journals, books and other information sources	5%	55%	40%
Informational technology support for teaching efforts	1%	65%	34%
Best aspects of library and information resources: Tripsaver (an online resource to get journal articles from Triangle universities) and the online access to journals.			
Areas of concern: Decreased access to online journals due to recent budget cuts.			
Improvement priorities: Increased access to online journals, a more functional university literature search/retrieval website, and better computer space.			

Faculty were asked to rate the adequacy of the clinical resources that they used:

	Not adequate	Adequate	Excellent
VTH caseload for teaching veterinary students	19%	49%	32%
VTH caseload for teaching interns and residents	12%	34%	54%
Large Animal Hospital as a teaching resource	16%	68%	16%
Small Animal Hospital as a teaching resource	10%	50%	40%
Teaching Animal Unit as a teaching resource	0%	15%	85%
Wake County Shelter Program as a teaching resource	0%	67%	33%
Field services as teaching resources	10%	45%	45%
Best aspects of clinical resources: Quality of the faculty, the Teaching Animal Unit, the imaging capabilities, and the high teaching hospital caseload.			
Areas of concern: Small necropsy caseload, too few primary care cases and a low food animal caseload.			
Improvement priorities: Increased space, the organization of the small animal ward space, combining the state and CVM diagnostic laboratories, increased number of primary care cases, and increased hospital technical help to allow more teaching time with a busy caseload.			

When asked if he/she had any other areas of concern 50% answered yes.
The concerns most commonly expressed were the conflict between a high caseload and teaching in the hospital, the low number of primary care cases, grade inflation, the lack of diversity of students and student backgrounds, and the ability of the students to solve problems, rather than simply memorizing facts.

APPENDIX 11-5: OTHER ASSESSMENT OUTCOMES

	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Original works in peer-reviewed journals	210	166	189	177	225	237	262
Case reports in peer-reviewed journals	30	24	31	30	21	29	19
Review articles in peer-reviewed journals	20	31	27	19	22	22	30
Books	5	2	3	3	9	2	5
Book Chapters	78	63	41	35	97	68	38
Abstracts	284	233	228	297	230	210	298
Invited research presentations	288	591	590	646	424	435	421
Electronic media	31	52	30	41	28	31	28
CE presentations	59	112	99	80	68	55	44
Bulletins, booklets	19	14	24	23	14	15	12
Copyrights	5	3	4	8	1	1	1
Patents	10	10	17	9	2	2	1

APPENDIX 11-6: UNIVERSITY AND EXTRAMURAL FACULTY AWARDS (BY DEPARTMENT

DOCS - Department of Clinical Sciences MBS - Molecular Biomedical Sciences PHP - Population Health and Pathobiology

	Dept.	Faculty	Award
2001	DOCS	Ferris	NCSU Alumni Extension Award, accepted into the North Carolina State Academy of Outstanding Faculty Engaged in Extension
	DOCS	Ford	Distinguished Faculty of The Southern Medical Association
	MBS	Arasu	American Association for Advancement of Science Congressional Science Fellowship
	PHP	Barnes	Environmental Mutagen Society Special Recognition Award
	PHP	Guy	Distinguished Alumnus, University of Tennessee College of Veterinary Medicine
2002	DOCS	Davidson	Inducted into NCSU Academy of Outstanding Teachers
	DOCS	DeYoung	NC Veterinary Medical Association Distinguished Veterinarian Award
	DOCS	Ford	Honorary Diplomate Status in the American College of Veterinary Preventative Medicine
	DOCS	Hansen	American College of Veterinary Emergency and Critical Care Scientific Achievement Award for Pain Management of the Critically Ill
	DOCS	Lewbart	University Board of Governors' Award for Excellence in Teaching
	DOCS	Mansmann	Inducted into the International Equine Veterinarian's Hall of Fame
	DOCS	Stoskopf	Inducted into the George H. Glover Gallery of Contemporary Faculty at Colorado State University
	MBS	Brownie	Inducted into Sigma Iota Rho National Honor Society for International Studies
	PHP	Anderson	Outstanding Extension Service Award, NCSU Academy of Outstanding Faculty Engaged in Extension
	PHP	Floyd	Richard Deese Award for Advancing the Performance Principles of the Alabama Beef Cattle Improvement Association
	PHP	Guy	Pfizer Animal Health Award for Research
	PHP	Riviere	Burroughs Wellcome Fund Distinguished Professor
PHP	Vahlenkamp	Sixth International Feline Retrovirus Research Symposium, best oral presentation	
2003	DOCS	Ferris	State Animal Response Team Founder Award
	DOCS	Harms	2003 Outstanding Extension Service Award NCSU
	DOCS	Harms	American College of Zoological Medicine, President's Award for Service
	DOCS	Olivry	<i>Sigma Xi</i> Faculty Research Award, NC State University Chapter of <i>Sigma Xi</i> , The Scientific Research Society
	DOCS	Stoskopf	Emil Dolensek Award for lifetime achievement in Wildlife Conservation and Health from the Wildlife Conservation Society
	MBS	Smallwood	North Carolina Veterinary Medical Association Distinguished Veterinarian Award
	MBS	Smoak	F. Clark Fraser Investigator Award - Teratology Society
PHP	Anderson	Outstanding Extension Service Award - The Academy of Outstanding Faculty Engaged in Extension	

	PHP	Anderson	Alumni Outstanding Extension and Outreach Award
	PHP	Kennedy-Stopkopf	ACZM President's Service Award
	PHP	Vaillancourt	Lamplighter Award - The US Poultry and Egg Association
2004	DOCS	Birkenheuer	2004 Pollack Thesis and Dissertation Award
	DOCS	Breitschwerdt	2004 Distinguished Alumnus Award from the University of Georgia
	DOCS	Hawkins	Recognized as Distinguished Alumnus at Animal Medical Center, NYC
	DOCS	Monteiro	Certificate of Recognition for Outstanding Service and Dedication from Sigma Xi Scientific Research Society
	DOCS	Olivry	American College of Veterinary Dermatology Award for Excellence for Outstanding Contributions to Science and Teaching
	MBS	Adler	Holladay Medal, NCSU
	MBS	Adler	NIH 10 year MERIT Research Award
	PHP	Altier	Pfizer Animal Health Award for Research Excellence
	PHP	Riviere	Inducted into the Institute of Medicine of the National Academies
	PHP	Roberts	Outstanding Extension Service Award - NCSU Academy of Outstanding Faculty Engaged in Extension
2005	DOCS	Breitschwerdt	World Small Animal Veterinary Association Waltham International Award for Scientific Achievement
	DOCS	Breitschwerdt	American College of Veterinary Internal Medicine RW Kirk Award for Professional Excellence
	DOCS	Ford	Speaker of the Year, 2005 North American Veterinary Conference
	DOCS	Ford	2005 Distinguished Alumni Award, College of Veterinary Medicine, The Ohio State University
	DOCS	Keene	AMC Distinguished Alumni Award, 2005
	DOCS	Noga	Leading Scientists of the World, 2005
	MBS	Adler	UNC Board of Governor's O. Max Gardner Award
	MBS	Adler	NIH NHLBI MERIT Award (5 R37 HL-36982): 2004-2014
	PHP	Barnes	Phibro Animal Health Excellence in Poultry Award - American Association of Avian Pathologists
	PHP	Barnes	Outstanding Extension Service Award - NCSU Academy of Outstanding Faculty Engaged in Extension
	PHP	Barnes	Member - NCSU Academy of Outstanding Faculty Engaged in Extension
	PHP	Riviere	Elanco Distinguished Lecturer Award

APPENDIX 11-7: CVM COMPACT PLAN

College of Veterinary Medicine Compact Plan Initiatives, 2005-2007

Initiatives for 2006-2007

1. Functional Genomics – Center for Comparative Molecular Medicine

Center for Comparative Medicine and Translational Research: This initiative successfully established this new Center at the CVM, which emphasizes research into the molecular mechanisms of animal (and human) disease. The research foci of the Center are Molecular Medicine and Comparative Genomics, with subspecialties (i.e., research strengths) of research being identified. This Center encompasses faculty from the CVM, as well as other colleges at NCSU (i.e., CALS, PAMS, Engineering). It is envisioned that this Center will foster research collaborations between basic and clinical scientists, and will foster the development of research programs that will be competitive for Program Project grants from the NIH.

In order to insure the success of this initiative, it is recognized that the Center will require strong leadership. We appointed Dr. Jorge Piedrahita as Interim Director and are currently recruiting for an internationally recognized biomedical scientist to serve as permanent Director of the Center. This individual will need to have an established, active, and extramurally funded research program (preferably by multiple NIH grants). The new Director will need to be capable of facilitating interactions between diverse research groups, and will need to facilitate the submission of program and core grants to support the Center. This Center will also require additional faculty with research excellence in molecular biomedical science. For this, two junior faculty will be recruited to join the Center, with the faculty holding primary academic appointments in one of the three CVM departments. It is envisioned that the junior faculty would have research programs that would bridge current research strengths in the College, in order to foster interactions between research groups and the development of program project grant applications.

This new Center will foster the development of research programs that take advantage of the expertise of both basic and clinical scientists in the CVM. An additional desired outcome is the successful competition for NIH Program Project grants to support the new research programs generated by Center faculty.

The development of this Center, the continued growth of research in general, plus the development of the Centennial Biomedical Campus, all falls under the guidance of the Associate Dean for Research and Graduate Studies. With the importance of these areas, the CVM would like to separate responsibilities, creating a position specifically as the CVM Director of Biomedical Program Development. This would provide focused support for the development of the Biomedical Campus, including interactions with Centennial Campus officials, Financial Services, Planning and Analysis and other pertinent groups. This new position would be supported, in part, by the Director of Government and Corporate Relations, thus facilitating the development of academic, corporate and governmental partnerships to further enhance on-campus biomedical programs.

Resources: Recruiting the top candidates the Center Director and new faculty positions will require competitive startup packages (funded by CVM and Vice Chancellor for Research). The CVM is also asking for permanent salary funding to create a position as Director of Biomedical Program Development.

2. Biodefense of Animal & Human Health, Food Safety, and Profitable Production of Healthy Food Animals

Background: Biopreparedness is the suite of tools and practices limiting populations' exposure to harmful agents, and in an outbreak, detecting the agent(s) and treating the exposed. 75% of CDC's "agents of concern" are zoonotic (infecting humans and animals); SARS and the H5N1 Avian Influenza are but two examples. Agents in the USA, such as Johne's Disease, are recognized as potential zoonotic diseases needing increased efforts to eradicate them. Non-zoonotic agents, such as Foot and Mouth Disease, inflict severe socioeconomic harm on their own. In 2004, agriculture accounted for 17% of NC's GDP, 20% of its employment, and generated over \$59 B; at least three times more than the next biggest industry, tourism. Animal agriculture comprises most of NC's agricultural income. Because of its importance to our economic and social stability, accidental or purposeful exposure to a catastrophic foreign animal disease could devastate our entire economy and threaten the human food supply.

The Issue: Veterinarians are key players in enhancing security of animal agriculture, however, fewer graduates choose private/public practice in food animal health/public health: the 2005 National Academies' study, "Animal Health at the Crossroads", concluded "...The workforce on the front lines of animal care is not adequately educated and trained to deal with animal disease issues, and there is a shortage of veterinarians...".

The Food Animal Security, Sustainability, & Biopreparedness Initiative: The CVM will develop a tripartite program of excellence in agricultural animal health, food safety & security, and biopreparedness: [1] training in medicine, diagnostics, emergency response, research and epidemiology; [2] exposure to/development of state-of-the-art diagnostic assays; and [3] enhanced surge capacity to rapidly respond to state/industry needs. Food supply veterinarians finishing the program will be prepared to meet the new needs and mandates of private and public practice.

The goal is to become a full NCSU Center within five years of inception. The CVM will leverage existing strengths in animal health, detection/diagnostics, and biosecurity: the Food Animal Residue Avoidance Databank, the Center for Comparative Medicine and Translational Research, and partnerships with the NC Departments of Agriculture, Health, and Crime Control. The CVM is a member in the Agricultural Disaster Research Institute and the Southeast Regional Center of Excellence in Emerging Infections and Biodefense, offering opportunities to collaborate on shared missions. In addition, our research building facilitates collaborations by providing access to two BSL-3 AG laboratories.

Outcomes: The greatest outcomes will be outbreaks that do NOT occur. Other outcomes include:

- Facilitating public/private partnerships in the areas of public health/food safety, and enhancing student education towards careers in private/public food supply veterinary service.
- Training the next generation of food animal veterinarians who can respond to evolving opportunities for securing animal industries, protecting food safety/security, and promoting biopreparedness.
- Providing CVM faculty/staff/students state-of-the-art pathogen detection, surveillance, and diagnostic assays for agricultural animal health and food safety.
- Developing surge capacity to respond quickly to industry and state needs in agricultural animal health, food safety/security, and biopreparedness.
- Establish a new Center of Food Animal Security, Sustainability, & Biopreparedness

Resources: The Department of Population Health and Pathobiology will soon have up to five open faculty positions. It is planned to do a focused recruitment and hire of all five in support of Livestock Infectious Diseases and Biosecurity as core hires for the proposed Center. The CVM is requesting salary support to bring all five positions up to highly competitive levels. The CVM is also requesting funding for a Program/Center Director. Funding will be used for an interim Director until a national search can be done for a permanent leader of this program. The CVM would also like to expand the duties of the Director of Corporate and Government Relations in support of the development of this Center, and is requesting salary support.

3. Companion Animal Health Program

While already recognized as one of the leading companion animal health programs nationally, the College is preparing to move the program to the forefront by development of new state-of-the-art facilities, recruitment of additional clinical faculty and introduction of additional areas of academic clinical expertise. Central to this endeavor will be the design and construction of the new Randall B. Terry Companion Animal Veterinary Medical Center. Named after long-term friend and benefactor of the College, the late Randall Terry, the center will provide 120,000 sq ft of technologically advanced clinical space designed for optimum delivery of specialty patient care, student instruction and clinical investigation. Complementing the specialty care services of the Terry Center will be the renovation and redevelopment of the current 60,000 sq ft small animal hospital into a new Companion Animal Outpatient and Wellness Center. The two adjacent centers will provide complementary public engagement and instruction platforms that expand current programs in orthopedics, general surgery, internal medicine, cardiology, ophthalmology, oncology, neurology, dermatology, anesthesia, radiology, pain management, clinical pathology and pharmacology, and introduce new areas of focus such as behavioral medicine, nutrition, rehabilitation, dentistry, companion animal reproduction and outpatient radiology and surgery.

Programmatic planning for the RBT Medical Center is complete, and we are in the midst of schematic design for the new building. It is anticipated that construction documents will be initiated by Fall 2006.

Resources: To accomplish these goals, a vigorous capital campaign is underway as part of the NC State's overall capital campaign. Funding for the construction and remodeling projects outlined above will come from a combination of sources, including state bond funds, gift funds and teaching hospital generated income. Recurring funds for additional clinical faculty, house-officers and staff to conduct these programs are projected to come from a combination of state-appropriate and tuition revenues and teaching hospital generated revenues.

4. Equine Health Program

The equine industry of North Carolina is a robust and rapidly growing industry focused on the performance horse (event, hunt, dressage, western), with a smaller but healthy breeding and race training industry. Over the past several years we have focused on gaining depth and quality among our faculty and are nearing critical mass in the focus areas of gastroenterology, orthopedics and sports medicine, ophthalmology, reproduction and epidemiology. Long term (5-10 years) success of this program will also be dependent upon construction of new facilities to house a premiere equine health program. In the short term, however, much must be accomplished to consolidate the reputation of the program, develop private and industry partnerships and form a foundation for private donor/sponsor activity. In the current year, Dr. Anthony Blikslager has been appointed as Assistant Department Head for Equine Medicine, working to establish academic-private sector relationships, bring an industry perspective to the development of our program and convey to the horse-owning public the significant progress and accomplishments of the program.

The CVM has restructured the oversight of the facility at Southern Pines, formally known as the Veterinary Equine Research Center and made it a remote site of the Veterinary Teaching Hospital under the Associate Dean and Director of Veterinary Medical Services. The facility is now the NC State Equine Health Center at Southern Pines, and is providing state of the art equine reproduction services, including embryo transfer, as well as providing equine podiatry and lameness service. The College and VTH are both investing in facility improvements with the goal of continuing to expand equine services and the CVM presence in the Southern Pines area.

The Director of the Equine Health Program has been funded on a part-time basis from the dean's office and is now fully funded between the Dean's Office and the VTH. The Dean's Office is also funding the administrative stipend for the Assistant Department Head, and is providing administrative support for the Program.

5. Animal Welfare, Ethics and Public Policy

With continued progress toward scientifically and technologically intensive modalities of animal care, and sustainable animal resource use, it is imperative that the College establish leadership in complementary programs focused on the humane and ethical care of animals within our society. Over the past five years, through the Campus-Community Partnership Program, the College has taken a regional leadership role in shelter animal medicine and the issues of marginalized companion animals within central North Carolina. It is now time to build on this start and develop a comprehensive animal welfare program that includes an extensive student/public education element, and a public policy research and development component. It is also necessary to move beyond issues relating exclusively to companion animal welfare, and lead the national discussion of agricultural, laboratory, zoological and wild animal welfare.

Outcomes: It is a clear objective that within a 3-5 year period this program achieve the status of a University recognized Center for Animal Welfare Studies, and be nationally and internationally recognized as a model for combining effective public engagement, professional and graduate education and public policy research. Some of the issues Animal Welfare, Ethics and Public Policy (AWEPP) seeks to address include diminishing pet abandonment; decreasing an individual's propensity for violence; decreasing animal abuse and fighting; providing comfort to individuals dealing with the death of a companion animal; enhancing quality of life for the elderly, disabled or mentally ill; fostering resilient individuals and families; enabling advances in animal-assisted therapy and rehabilitation; and understanding animal behaviors.

Resources: To accomplish this ambitious goal, we need key faculty and support staff, and a highly visible outreach program that will extend current community and academic partnerships and encourage private and foundation based donor activity. Essential to this strategy was the hire of the Director of AWEPP. We are

currently recruiting for additional field veterinary personnel and have permanent technical staff to support field operations. Administrative support is also being provided through the Dean's Office. The Director's salary is currently funded through short-term use of lapsed salary and this compact requests permanent funding for the Director and administrative staff who will build this important program to a sustainable level.

Initiative Updates

6. Preparing the Veterinary Professional Workforce for the 21st Century

The veterinary medical profession is facing significant challenges and opportunities. This College is addressing the issues facing the Veterinary Professional through a combination of curricular changes and enhancements:

Curriculum Revision: Preparing students for a more demanding future Knowledge in the veterinary medical field is increasing at a tremendous rate. It is no longer possible to educate veterinary students with all the skills and knowledge necessary to be proficient in treatment of all animal species. There are concerns among veterinary practitioners that new graduates lack the skills necessary to be economically productive when they graduate, contributing to low starting salaries. In order to better prepare our graduates for their future careers, the CVM regularly reviews curriculum and is actively addressing new teaching opportunities to meet the future needs of veterinary medicine.

Teaching Animal Unit (TAU): The Teaching Animal Unit (TAU) is unique to NCSU-CVM in that it provides live animal instruction regarding health maintenance and production of farm animals and horses. It provides an opportunity for students to develop confidence in handling and managing these animals and understanding production management, food safety, housing, biosecurity and animal welfare. For many students, it is the first opportunity to familiarize themselves with and understand animal agriculture. In addition, students are exposed to issues of production management, food safety, housing, animal welfare, biosecurity, and environmental regulations. The College continues to support the TAU with facility improvements, (animal housing, etc) and is currently finalizing the installation of fiber to the barns and TAU offices. The full Internet access will support a web-cam system for monitoring animal care, particularly during foaling/lambing/calving season.

CVM PDA Project: The College of Veterinary Medicine continues implementation of its handheld computing initiative. Color screen Personal Digital Assistants and 802.11b wireless connectivity modules are distributed to students in all classes. PDAs and communication modules are also distributed to instructional faculty. The College is currently implementing a wireless plan that will provide full wireless Internet access for the entire main building of the CVM.

Image Database: The College has several digital image management systems. Continued implementation of the systems will allow faculty to share data image resources, decrease the duplicative production of images for multiple faculty members, and improve student-learning outcomes by allowing students to easily retrieve images representing the many topics studied in the DVM program. With the expansion of access to this system, a new server has been ordered, as part of a replacement scheduled approximately every three years.

Veterinary Teaching Hospital –Emergency Services: An emergency service, staffed by veterinarians hired by the VTH, was initiated in February 2004. The Service is staffed by 2.5 fte clinical veterinarians, supported by several House Officers, and two shifts veterinary technicians. The Service operates from 5pm to 8am weekdays, and provides 24-hour coverage on weekends. Students also rotate through the service, gaining hands on experience in primary care cases, broadening their experience beyond the secondary and tertiary referral cases seen through the regular hospital caseload. The College provided salary support for the clinical veterinarians for two years, as there were not sufficient staffing resources to manage the additional caseload. Currently, the Service has expanded sufficiently to cover all additional expenses.

7. Biomedical Engineering

The CVM is the only health professions professional college at NC State. We have the faculty expertise (anesthesia, surgery, imaging, and in clinical pathology and pathology), experience (about 17,000 cases per year of spontaneous disease in animals) and facilities (for housing and care of laboratory animals) to make significant contributions to the Biomedical Engineering program. The desired outcomes are an expansion of multidisciplinary research programs within NC State and increased availability of engineering expertise for CVM

faculty. Resources are needed to create new positions with joint appointments between BME and CVM. In addition, BME research space is needed, possibly on the developing Centennial Biomedical Campus.

8. Diversity

Veterinary medicine as a profession has relatively few African Americans with most being graduates of Tuskegee University. The number of minorities in our national applicant pool and in our student populations is relatively low at about 2%. There is a need to increase the number of underrepresented people in our profession so that the profession can provide for the animal health care needs of an increasingly diverse population in the state, region, and meet our opportunities in the world. The CVM Director of Diversity has developed a comprehensive approach to increasing the diversity of the College, including:

- Laboratory Animal Scholars Program
- Tuskegee Visiting Veterinary Scholar Program
- Diversity Enhancement House Officers
- Mentoring Program
- Recruitment
- CVM Professional Diversity Development

We continue to present college-wide programs that are held to address issues of climate for diversity. The incoming class for Fall 2005 had the highest number of minority students in the history of the CVM.

9. Center for Marine Science & Technology (CMAST)

The Center for Marine Sciences and Technology (CMAST) was developed to establish the first coastal facilities for NCSU marine sciences research and teaching. The CVM is one of three colleges with major participation in the center. Faculty from the CVM have been key players in the planning and operation of CMAST and its facilities. Founding programs of the center included Environmental Health and Food Safety, and have integrated veterinary medicine with marine biology, fisheries science, food science and physical oceanography. The cooperative and collaborative resources in Morehead City and the talents of key faculty provide the CVM with the best opportunity for development of marine veterinary medicine of any veterinary college in the United States.

Support of individual faculty assigned to CMAST is provided by their departments and grants, and varies. Basic support (local phones, internet, building upkeep) is provided through the CMAST operations budget, which is shared by PAMS, CALS and CVM. Only one of the 3 new CVM positions projected to support CMAST is currently funded; it is anticipated that a Veterinary Marine Diagnostic Pathologist and an Environmental Toxicologist positions would greatly enhance the productivity at CMAST. There is currently a proposal for construction of a dorm facility at CMAST, and the CVM has pledged to support the shared cost of the facility.

APPENDIX 11-8: COMPARATIVE DATA REPORT

Comparative position (relative ranking) among 28 US colleges based on data from the Comparative Data Report (Association of American Veterinary Medical Colleges):

Category	Specific Item	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Financial	Total Revenue	8	9	8	9	10	9	8
	State Appropriations	5	4	5	5	5	5	5
Faculty	Total Faculty (FTE)	6	4	3	4	4	5	5
	Total Women Faculty (FTE)	4	4	5	5	7	6	10
	Total Minority Faculty (FTE)	9	4	11	4	2	4	7
	Mean Salary Professor	9	12	11	13	12	10	10
	Mean Salary Associate	9	8	7	8	10	11	13
Students	Mean Salary Assistant	3	8	5	5	8	8	12
	Instructional Expenditures	6	10	8	8	11	11	10
	# DVM Students	20	19	17	19	20	20	20
	# Minority Students	20	20	16	16	22	20	11
	Tuition & Fees - Residents	27	27	27	20	25	24	28
	Tuition & Fees - Nonresidents	10	12	14	6	8	12	20
	Mean Educational Debt	26	27	26	23	24	24	12
Hospital	Revenue	16	16	16	15	15	15	6**
	Teaching Hospital Expenditures	12	12	11	12	12	15	9
	# Interns	6	8	9	7	11	13	9
	# Residents	5	4	6	10	12	8	5
	# Small Animal Patient Visits	NC	10/16*	9/14*	8/15*	9	12	10
	# Equine Patient Visits	NC	12	15	16	26	17	11
Research	# Animals treated, Bovine Field	4	9	10	15	16	18	15
	Funded Extramural Research	NC	12	12	12	15	17	14
	Research Expenditures	6	5	7	7	6	7	15***

NC = not comparable

* Dog/Cat

** In hospital, now include practice plan in hospital revenue. Previously not included.

*** In research expenditures, previously included % of salary allotted to research FTE. Now salary is not included.

APPENDIX 11-9: CLINICAL COMPETENCIES

Husbandry/Restraint/Routine Client Education skills

- Demonstrate the ability to identify the major categories for common domestic species. Includes being able to identify yearling heifer, steer calf, brood cow, etc. Identify common coat colors in the horse, mare, gelding, stallion, foal, yearling.
- Demonstrate the ability to safely catch and restrain a horse, a cow, a pig and a sheep. Includes haltering, leading, twitching, restraining for venapuncture, and picking up feet.
- Demonstrate a quick release knot and a quick-release halter tie or a quick release tail tie.
- Demonstrate the ability to safely catch and restrain a dog, a cat, a bird species, a reptile species, one small mammal other than a dog or cat.
- Demonstrate the ability to observe animal and state whether behaviors observed are normal/abnormal, one large animal species, one small animal species, one bird species, one reptile species, one small mammal other than dog or cat, one species of choice
- Demonstrate the ability to identify and evaluate basic large animal foods types: at least 3 types of hay, 2 types of grain, 2 major pig feeds
- Demonstrate ability to counsel potential owner on pet/animal selection criteria (eg:spp/breed vs. owner lifestyle)
- Demonstrate ability to educate owner on housing needs/socialization needs and methods /nutrition/ training (including house-breaking, if appropriate) and normal reproduction for one small animal and one large animal species
- Demonstrate ability to counsel owner on core vaccination requirements for one small animal and one large animal species
- Demonstrate ability to counsel owner on parasite control regimes for one small animal and one large animal species
- Demonstrate the ability to counsel potential owner on selection of, biological requirements of, and proper husbandry techniques for a zoological species commonly seen in practice.

Physical exam skills

- Perform basic physical exam dog, cat, horse, cow or small ruminant, pig, one reptile species, one bird species one small mammal other than dog or cat, one other species of your choice. Includes TPR, demonstrating the ability to localize and describe sounds in the thorax, localize and demonstrate organs within the abdomen, demonstrate abdominal palpation and auscultation. Must know normal TPR for a small mammal, dog, cat, horse, and cow. Must be able to name and identify major lymph nodes in appropriate species. Must be able to perform rectal exam and express anal sacs in dog.
- Body condition scoring in dog, cat, horse, cow
- Perform the following specialty exams :

Orthopedic (lameness) exam on a small animal patient and a horse, including naming and identification of all major joints, recognizing normal angles and range of motion for major joints and the hoof, use of a goniometer, use of a hoof tester, use of a hoof pick, use of a hoof gauge, flexion tests, thigh circumference measurement in dog

Neurologic exam small animal patient, horse, must demonstrate:

Patellar reflex
Withdrawal reflex
Panniculus reflex
Deep pain assessment
Menace response
Palpebral reflex
Pupillary light reflex
Conscious proprioception
Hopping
Bladder palpation/expression

Ophthalmic exam, including use of direct and indirect ophthalmoscope, ocular pressure measurement, small animal patient, horse. Must demonstrate:
Menace response

Pupillary light reflex
Dazzle reflex
Schirmer tear test
Fluorescein staining

Dermatologic exam, as appropriate for patient. Must demonstrate:

General dermatologic exam
Recognize primary and secondary dermatological lesions
Otic examination
Skin scrapings - deep / superficial
Skin cytology - tape/swab/aspiration
Otic cytology
Site selection and indications for wedge/punch skin biopsies
Appropriate methods of collection of samples for bacterial / fungal culture
Woods lamp examination
Trichogram

Cardiovascular exam, including identifying, describing, and assessing the clinical significance of transient heart sounds and murmurs, examining arterial and venous pulses, obtaining a resting standard 6-lead EKG, accurately measuring noninvasive arterial blood pressure in small and large animal patients

Oncologic exam, including tumor map, caliper measurement, fine needle aspirate, lymph node palpation and identification

Reproductive exam:

Obtain and interpret a vaginal smear in the bitch.
Conduct a pregnancy exam on a bovine, equine, and canine female.
Prepare and evaluate semen from either a stallion, bull, or a stud dog.
Conduct an examination of the external genitalia of the intact bovine, canine, and equine male and female.
Properly describe and correct malpresentations, positions, and postures in a case of bovine or equine dystocia. They should also be able to place obstetrical chains properly on either the fore or rear limbs of a bovine or equine fetus.

Sample taking

- Obtain a blood sample dog, cat, horse, cow, sheep, pig, one bird species, one reptile species, one small mammal other than dog or cat, one other species of your choice.
- Collect blood using needle and syringe
- Collect blood using vacutainer.
- Obtain a urine sample using catheterization
- Obtain a urine sample using cystocentesis
- Obtain a milk sample from a cow for mastitis evaluation
- Obtain a fecal sample
- Obtain a cloacal culture (bird)

Radiology, Necropsy, Clinical Pathology

- Perform radiographic exams for 5 patients (position, create, process, interpret radiographs)
- Perform complete necropsy on two animals of different species. Be able to select a pig from a group for post-mortem examination. In the pig, be able to identify major lymph nodes, tonsils, area of lung most affected by pneumonia, sites of ulcers.
- Process a blood sample (PCV, TS, glucose, BUN, make blood smear, separate serum, count cells and platelets)
- Process a urine sample (dipstick, specific gravity, cytology)
- Examine a fecal sample for parasites
- Perform an ELISA test

Basic medicine skills, experience, problem solving and case management

- Obtain a complete clinical history for 6 patients, including one special species patient. Obtain client histories with clinician supervision, demonstrating appropriate body language, eye contact, appropriate language, respect for client's emotions and view of the problem.
- Define "chief complaint" and problem list for 6 patients, including one special species patient.
- Make a differential diagnosis list for 6 patients, including one special species patient.
- Choose the appropriate diagnostic tests for 6 patients, including one special species patient.
- Create a problem-oriented medical record for 6 patients including one special species patient, demonstrating ability to organize and succinctly state facts and opinions with correct spelling and punctuation.
- Provide oral summary of 5 cases for peers, demonstrating organization and precise language
- Create laboratory flow sheet for 2 individual animals, demonstrate case management using flow sheet
- Follow 5 patients through treatment of a problem
- Discuss case progress with 5 clients, demonstrating ability to address client concerns, to discuss financial matters, empathy with client, appropriate boundaries with client
- Provide oral discharge instructions for 5 clients, demonstrating solicitation of client feedback to assure that the instructions are understood, solicitation of client's point of view and concerns regarding ability to provide treatment, appropriate demonstration of techniques
- Write 5 discharge instructions, demonstrating ability to organize and succinctly state facts and opinions with correct spelling and punctuation
- Perform follow-up phone calls on 5 patients to assure problem resolution or need for continuing diagnostics/therapy
- Participate in medical primary care clinic at least 5 days (wellness clinic, shelter, vaccination clinic, practice)
- Participate in the management of at least 5 medical referral patients (any species)
- Evaluate, workup and properly record a case involving a population of animals.
- Demonstrate oral administration of medications horse, ruminant, dog, cat, one bird species, one reptile species, one small mammal other than dog or cat, one other species of your choice. Includes demonstrating tablet administration, or the use of an oral dose syringe, as appropriate.
- Demonstrate SC administration of medication large animal, small animal, one bird species, one reptile species, one small mammal other than dog or cat, one other species of your choice
- Demonstrate IM administration of medication large animal, small animal, one bird species, one reptile species, one small mammal other than dog or cat, one other species of your choice. Includes being able to show landmarks for muscle groups, knowing muscles used in food animals, knowing pros and cons of each injection site. Specifically be able to discuss sites used for vaccines, large volumes (procaine penicillin in the horse), iron shots in pigs.
- Demonstrate bolus IV administration of medication large animal, small animal, other species of choice. Be able to discuss how to manage perivascular injection of a caustic material.
- Choose, calculate amounts and administer intravenous fluids to 8 animals, to include one bird species, one reptile species, one small mammal other than dog or cat.
- Choose and calculate correct drug dosages for 8 animals, including one patient receiving constant rate infusion drugs and one bird species, one reptile species, one small mammal other than dog or cat.
- Write 5 outpatient prescriptions in a format that would allow them to be filled at a compounding or human pharmacy
- Administer 5 controlled drugs, keeping correct records for each drug.
- Be able to load and operate a projectile drug delivery device (blow gun, air rifle, pole syringe)

Anesthesia and pain management, patient welfare

- Identify parts of an anesthesia machine
- Put together a circle system
- Put together a non-rebreathing system
- Place IV catheter in 3 small animals (dog, cat, small mammal)
- Place IV catheter in 3 large animals (horse, cow, goat, pig)
- Intubate 6 small animals, including at least 2 cats. Intubate or assist intubation of one bird species, one reptile species, and one small mammal other than dog or cat.
- Place blood pressure, ECG, and pulse oximetry monitors on 3 patients
- Perform anesthesia on 5 small animals (one to be a special species animal), including record keeping and demonstrating knowledge of monitoring equipment, anesthesia/analgesia

- Perform anesthesia on 2 large animals, including record keeping and demonstrating knowledge of monitoring equipment, anesthesia/analgesia
- Design pain management/anesthesia regime for 3 small animal surgical patients
- Design pain management/anesthesia regime for 2 special species animals
- Design pain management/anesthesia regime for 2 large animal surgical patient
- Design chronic pain management treatment (any species)
- Perform pain scoring on 5 patients (any species)
- Perform 3 local analgesic blocks on any species. Be able to demonstrate the landmarks for commonly used local blocks (dehorning, standing procedures in ruminants, declaw surgery in cats, etc)
- Perform 1 epidural on any species
- Participate in one euthanasia (any species) and explain indications and methods of euthanasia, including methods appropriate for zoological species commonly seen in practice
- Participate in enforcement of a humane handling issue or Explain humane standards for one population of animals
- Educate one lay person on an animal welfare issue

Dentistry

- Dental exam on small animal patient, including charting of lesions
- Dental exam on a large animal patient, demonstrating the ability to age a horse and a cow by its teeth. Know eruption times used for aging immature animals.
- Demonstrate canine or feline dental cleaning and extraction

Basic surgery skills, experience, and case management

- Demonstrate knot tying (square knot, friction knot, two hand tie, instrument tie)
- Demonstrate correct instrument handling (three point grip, pencil grip, suture cutting)
- Demonstrate basic suturing techniques (simple interrupted, simple continuous)
- Demonstrate pack preparation
- Demonstrate patient preparation
- Demonstrate sterile technique (scrubbing, gowning, gloving, draping, ability to keep a sterile field)
- Demonstrate wound closure, stent use, placement of mattress sutures
- Demonstrate drain placement
- Demonstrate bandaging techniques, small animal
- Demonstrate emergency bandaging techniques, large animal
- Demonstrate bandaging of an open wound
- Demonstrate suture or staple removal
- Act as primary surgeon for at least 10 surgical procedures, including feline castration, feline spay, canine castration, and canine spay
- Participate in the management of at least 5 surgical referral patients (any species)

Emergency and intensive care case management

- Demonstrate thoracocentesis in small animal patient
- Demonstrate abdominocentesis in small animal patient
- Demonstrate tracheostomy
- Demonstrate administration of nasal oxygen
- Demonstrate technique for gaining emergency venous access
- Demonstrate CPR for a small animal patient
- Demonstrate working knowledge of cardiac resuscitation drugs and goals for a small animal patient
- Outline steps for resuscitation of either a large or small animal in hypovolemic or septic shock including: goals of therapy, fluid therapy (choice of fluid, rate and amount, IV catheter choice), drug therapy and monitoring response of therapy.

Health promotion, disease prevention, zoonosis and food safety

- Health promotion/disease prevention (see restraint/husbandry/routine education/TAU sections)
- Demonstrate ability to educate lay person(s) on 5 zoonotic diseases including at least one that involves zoological species

- Spend one day with food safety veterinarian and demonstrate ability to educate lay person on 5 diseases transmitted by food, the role of the veterinarian in preventing transmission, and the precautions the lay person should take.
- Evaluate a veterinary clinical facility for environmentally responsible clinical practices including disposal of discarded therapeutic agents, energy conservation, and emissions/discharge management.
- Evaluate an animal production facility (farm, zoo, lab animal) for environmentally responsible practices including waste disposal, human/production animal/wildlife interactions, energy conservation, and emissions/discharge management.
- Fill out and complete a Coggins test form
- Complete a health certificate

Client communications and ethical conduct

- Present one ethical dilemma facing an individual veterinarian or the profession, demonstrate ability to choose a position based on system of values
- Demonstrate the ability to educate lay person(s) on an ethical or welfare issue applicable to zoological species. (Maintaining wild animals in captivity in zoos, as companion animals, Game ranching, Human interactions with urban/suburban wildlife, Wildlife Rehabilitation, Extralabel use of drugs in Wildlife).
- Written Communication (see Medicine skills)
- Oral Communication (see Medicine Skills, Animal Welfare)
- Client sensitivity/Grief counseling - Participate in counseling of a client that has lost an animal *or* Explain stages of grief and techniques for helping client deal with loss
- Teamwork - Be a member of 5 teams and receive passing grades for team participation skills
- Conflict resolution - Present one legal/conflict issue, demonstrating knowledge of the legal issue, both points of view in conflict, suggest possible resolution

Strong appreciation for the role of research in furthering the practice of veterinary medicine

Each DVM student is required to have one research-related educational experience before graduation. Such experiences could include, but are not limited to:

- Being in the Clinician Scientist Focus Area, with completion of its research requirements.
- Performing a summer of approved research at NCSU or another institution.
- Research thesis option within Zoological Medicine Focus Area.
- Successful completion of a research-related selective (i.e. Intro to Research at the CVM, Molecular Medicine Initiative selectives, research selectives personally arranged or already existing such as Advanced Pathology)
- Attending a research-related conference and supplying a three-page report on the experience.
- Attending the annual CVM Research Forum and supplying a three-page report on the experience.
- Attending a research seminar at the CVM, elsewhere at NCSU or at another institution and writing a three-page report on the seminar and one related publication. (Attending clinical conference is not included.)
- Writing and submitting a research proposal to an extramural funding agency.
- Research experiences in Special Topics courses (i.e. Swine Medicine).

The following skills will be assessed in Health Maintenance and Animal Production I, II, III Teaching Animal Unit

Must Learn Skills

Equine

Approach, catch and halter a horse
 Lead and turn a horse at the walk
 Lead a horse at the trot
 Pick up a forelimb and hind limb of a horse
 Groom and horse
 Use hoof testers
 Tie a quick release knot
 Use a weight tape
 Perform physical exam on adult horse
 Perform physical exam on neonatal foal
 Perform ocular exam

Place nose twitch
Perform skin fold twitch
Perform ear twitch
Place chain shank over nose
Place chain shank over lip
Complete written physical exam form
Collect blood into a vacutainer
Collect blood using a needle and syringe
Administer an oral medication
Administer an intramuscular injection
Administer an intravenous injection
Administer a subcutaneous injection
Fill out and complete a Coggins test form
Complete a health certificate
Perform lameness exam (including all flexion tests)
Perform neurological exam (including cranial nerve and movement exam)
Pass nasogastric tube

Cattle

Herding Animals
Correctly halter a cow
Tie a quick release knot
Cast a cow with a rope
Perform a Physical exam
Identify methods of identification of animals
Body condition scoring and relation to life cycle
Feed identification
Collect blood sample from jugular
Collect blood sample from the tail vein
Perform and interpret a TB test
Injection site identification (Beef Quality Assurance)
Identify and perform an intramuscular injection
Identify and perform an intravenous injection
Identify and perform subcutaneous injection
Identify needle sizes for IM, SQ, and IV injections
Administer an oral bolus to at least 2 cows
Pass a stomach tube and administer oral fluids
Processing calves:

- Know how to perform all procedures
- Actively perform at least two procedures (tattooing, castration, dis-budding, implanting)

Pregnancy check > 5months
Collect a sterile milk sample
Perform a CMT test
Interpret a CMT test
Properly use a hoof knife
Restrain and lift a foot for trimming or lameness evaluation

Sheep/Goats

Know and use FAMACHA system for parasite control
Blood collection from jugular vein
Identify jugular landmarks, lung fields, rumen location
Determine age of goats or sheep
Perform vaccinations
Perform intramuscular injection (identify sites)
Perform subcutaneous injection (identify sites)
Perform a foot trim
Body condition score a goat or sheep
TB test a goat or sheep
Disbudding procedures and nerve blocks (goat only)

Perform an ultrasound pregnancy diagnosis
Interpret an ultrasound diagnosis
Perform a physical exam
Interpret ultrasound pregnancy diagnosis
Restrain a sheep or goat
Administer an oral medication to a sheep or goat

Swine

Safely restrain suckling, nursery, and finisher pigs
Safely move nursery or finisher pigs between pens or sort within pen
Identify which TAU pig housing facilities are for what age groups
Collect and interpret sow and piglet data to:

- Calculate pigs born alive, total pigs born, number of piglets born alive, percent of piglets liveborn.
- Calculate the total number of pigs weaned, % preweaning mortality for a farrowing group, count # pigs currently in the nursery, and calculate current % nursery mortality.

Identify the major feed ingredients in pig rations
Recognize normal feeding behavior
Perform pregnancy diagnosis in female pigs using different methods
Identify signs of estrus in the female pig
Complete physical examinations on individuals and groups of pigs
Calculate rates of morbidity and mortality
Restrain and collect blood from nursery and/or finishing age pigs
List the key criteria for selection of optimal pigs for diagnostic testing
Identify these key diagnostically significant anatomic structures:

- Tonsils, turbinates, region of stomach prone to ulcers, ileum, spiral colon, lung lobes, lymph nodes

Poultry

Catch and safely restrain a turkey for physical examination
Catch and safely restrain a chicken for physical examination
Perform a basic physical examination on turkey
Perform a basic physical examination on a chicken
Evaluate general health status of a turkey flock
Evaluate general health status of a chicken flock
Perform a cloacal swab on a turkey
Perform a cloacal swab on a chicken
Perform a tracheal swab on a turkey
Perform a choanal swab on a turkey
Collect a blood sample via wing vein on a turkey
Collect a blood sample via wing vein on a chicken
Perform a subcutaneous injection on a turkey
Perform an intramuscular injection on a turkey