

## **Unit Plan for Assessing and Improving Student Learning in Degree Programs**

**Unit:** College of Veterinary Medicine (DVM Professional Program)

**Unit Head Approval:** J.H. Foreman, Associate Dean for Academic and Student Affairs

**Date:** May 5, 2008

### **SECTION 1: PAST ASSESSMENT RESULTS**

**Brief description of changes or improvements made in your unit as the result of assessment results since 2000.**

The College of Veterinary Medicine has been collecting outcomes assessment data for 15 years or more. Data prior to 1997 are summarized in a College Outcomes Assessment Report in December 1998. In Summer 2004, a Curriculum Concept Mapping study was performed to assess what is taught and what needs to be taught better in the DVM curriculum. In Summer 2006, a series of Faculty Forums was held to collect data from various stakeholders regarding potential curriculum revisions. Annually or semi-annually, a number of different assessments are performed to collect data from current or previous students and from employers.

Examples of simple outcomes that have been measured annually include # graduates; median GPA by class; standardized test scores; numbers of graduating seniors entering fellowships, internships, or residencies; and numbers of employed recent graduates (summarized below for the last several years):

**# students who graduated:**

2001	90
2002	99
2003	99
2004	98
2005	103
2006	95
2007	99
2008	95*

\* anticipated number of DVM graduates on May 11, 2008. One fourth year student graduated in December 2007.

**GPA (median):**

Class	
Median GPA (end Fall 2007) / 4.000 scale	
2011	3.294
2010	3.210
2009	3.110
2008	3.291

**Standardized test scores:**

Since 2000, the nationally-standardized test for veterinary college graduates in the United States has been the North American Veterinary Licensing Examination (NAVLE). Mean (medians not available, not reported by the NAVLE examiners) pass rates (percentage of those examined) for UIUC graduates and the nation are summarized below (the scores for 07-08 are pending completion of the examination during the second examination window in April 2008):

	UIUC	National
00-01	97	96
01-02	99	97
02-03	99	97
03-04	99	98
04-05	94	96
05-06	95	95
06-07	94	96
07-08	pending	pending

**# graduates with fellowships:**

DVM graduates are not required to perform internships or residencies as physicians are required to do upon graduation. These positions are optional upon DVM graduation and are quite competitive. Our graduates' competitiveness for these positions is reflected by the data below which document that typically 20-25% of our graduates apply successfully for these positions. Data are reported as percentage of responding graduates who accepted post-graduate training positions in either graduate school (research) and/or clinical internship/residency programs (AVMA question #16):

Program	
1998	18
1999	19
2000	11
2001	17
2002	16
2003	17
2004	22
2005	21

2006  
2007

\*\* The AVMA survey question asks for employment plans for advanced or post-graduate study subdivided into plans for MS, MPH, PhD, internship, or residency training, but the answers prior to 2006 were reported together simply as “advanced study.” More recently the subgroup responses have been reported separately.

### # graduates employed at graduation:

Data are summarized as the number and percentage of responding students who have received offers of employment, and the mean number of offers of employment (AVMA question #14). Data are reported only for those students who responded “yes” (that they had actively sought employment before graduation) in response to AVMA question #12 (“Have you sought or are you currently seeking employment in veterinary medicine or advanced education?”).

	#students	%students	Mean # offers
1998	58	84.1	1.97
1999	61	79.2	2.74
2000	50	84.8	1.64
2001	77	95.1	2.32
2002	82	95.4	2.56
2003	85	90.4	2.57
2004	87	90.6	2.27
2005	83	91.2	2.39
2006	86	94.5	1.93
2007	78	87.6	2.36

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### Salary:

Data are reported only for those students who responded “yes” (that they had actively sought employment before graduation) in response to AVMA question #12 (“Have you sought or are you currently seeking employment in veterinary medicine or advanced education?”).

	Median salary (USD)	Mean salary (USD):
1998	36,000	34,259
1999	NA	37,729
2000	NA	41,285
2001	48,000	42,961
2002	48,000	43,469
2003	50,000	47,740
2004	50,000	45,892
2005	55,000	48,254

2006	51,500	47,242
2007	50,000	47,585

**Since 1998, these and other outcomes assessments have been used to modify College DVM programs including:**

**4<sup>th</sup> Year Tracking:** Since the last major curriculum revision in 2000, DVM students concentrate (or “track”) during their 4<sup>th</sup> or clinical year in one of six areas: small animals, zoological animals, equine, food animals, general or mixed practice, and custom track. Custom tracks have included emphases in zoological animal medicine (to a greater extent than the zoo track allows), aquatic animal medicine, environmental and conversation medicine, and governmental studies.

**Joint Degree Program between the College DVM curriculum and the University of Illinois – Chicago MPH curriculum:** This program is particularly innovative and important given the reported nationwide dearth of veterinarians with training in epidemiology and food animal medicine. There is an emphasis nationally (AVMA, USDA, CDC) on the need for increased numbers of veterinarians with public health training in the face of bioterrorism and potential threats to food and water supplies. Bioterrorism, global warming, animal cloning, and Mad Cow Disease are just some examples of these threats. Other diverse issues with dangerous veterinary implications for public health include the threat of avian influenza mutating into a human influenza pandemic, the reported surge in methicillin-resistant *Staphylococcus aureus* (MRSA) infections in human and animal patients, and the use of dogs in fighting and gambling. This goal of this joint DVM-MPH program is to help to address these manpower shortages cited by federal agencies.

**Guaranteed Early Admissions Programs:** The College has negotiated one 3+4 guaranteed admission program with one Illinois liberal arts undergraduate institution (Augustana College in Rock Island, Illinois). Through this joint program the College identifies outstanding undergraduate students at an early point in their undergraduate curriculum. These students may be admitted “early decision” to the College, but must maintain a 3.5 GPA (or better) each undergraduate semester prior to early (after 3 years) or scheduled (after 4 years) matriculation to the College. Those who choose to come early still receive their Augustana BS or BA degree after successful completion of their first year of veterinary school at UIUC. Similar programs are being negotiated now at Chicago State University and at Elmhurst College. Such a program at Chicago State would allow the College to address some of its concerns with respect to underrepresented minorities since the applicant pool at Chicago State is traditionally >90% African-American.

**Chicago Zoological and Aquatic Animal Medicine Programs:** The College sponsors faculty members who work primarily in Chicago at the Brookfield Zoo and the Shedd Aquarium. Through these faculty and their non-faculty colleagues, DVM students electively rotate through Brookfield or Shedd during their final clinical year to receive training in zoological, exotic, and aquatic species. This unique partnership between UIUC

faculty/students and privately-owned facilities has provided otherwise unavailable curricular benefits in the study of comparative medicine for DVM students.

**Chicago and Champaign Shelter Medicine Programs:** The College has partnered with humane society animal shelters in Champaign (Champaign County Humane Society) and Chicago (Anti-Cruelty Society) to provide unique and innovative surgical experiences for fourth year DVM students. These DVM students electively rotate for a minimum of 2 weeks at one of these two humane societies to provide them with irreplaceable surgical experience in the spay-neuter program of the shelter. They learn about high-volume, low-cost provision of medical and surgical services in a practical setting. This experience is virtually impossible to recreate in a Veterinary Teaching Hospital environment, and provides the students with considerable and concentrated surgical experience in a very short time span.

**Primary Care Externships for credit:** The Veterinary Teaching Hospital is primarily a tertiary referral center for cases which entry-level practitioners cannot diagnose or cannot treat properly with their limited equipment inventory. In response to student and employer responses regarding a need for more practical clinical experience, the College instituted a new senior year clinical preceptorship/externship program allowing students to see practice with primary care practitioners working in the major domestic species which undergo individual animal care, medicine, and surgery (dog, cat, horse, cow, sheep, goat).

**iFARMS:** iFARMS is the Illinois Food Animal Reproduction, Medicine, and Surgery program for stipends to support veterinary students in pursuing practical summer study/work experiences. This new program is overseen by the Office the Associate Dean for Academic and Student Affairs. This award is open to all current first and second year DVM students with an interest in Food Animal and Production Medicine. Sixteen students submitted viable applications in November 2007 for summer 2008 experiences. The program pays a generous weekly stipend for up to 4 weeks in one summer. More than one award is available. The goal is to encourage further interest in Food Animal and Production Medicine for those students who may be interested in food and fiber animals as a veterinary career. The iFARMS projects replace the student externships at the Dixon Springs Research Facility which now is overseen by the College of Agricultural, Consumer, and Environmental Sciences, not the College of Veterinary Medicine. Successful applicants are required to present a written paper and oral report on their summer experiences upon their return to the College in the fall semester of 2008.

**iINNOVATIONS.** iINNOVATIONS IN TEACHING DVMs is a new program to support development of new teaching innovations in the DVM curriculum. The program is intended to provide funds, to be expended only in The Design Group, for the development of new courses or the development of new innovations in existing courses which expand and improve teaching in the DVM curriculum. The funds are not intended to be used for annual updates of existing courses. These awards are open to all current tenure-or clinical-track faculty. Six viable proposals were received in December 2007. Four were fully funded, one received partial funding, and one will be deferred for six

months until full funding can be obtained in the next fiscal year. A request for proposals for the 2008-2009 fiscal year was sent to faculty on May 1, 2008.

## **SECTION 2: REVISED ASSESSMENT PLAN**

### **(a) PROCESS: Brief description of the process followed to develop or revise this assessment plan.**

In Summer 2004, a Curriculum Concept Mapping study was performed to assess what is currently emphasized and areas of deficiency exist and need remediation in the DVM curriculum.

In Spring/Summer 2005, a series of Focus Groups was formed by the Chair of the College Courses and Curriculum Committee. These subcommittees met individually to examine each year of the curriculum to determine what was being taught and what might be taught better. Reports were issued from each subcommittee to the Chair.

In Summer 2006, a series of Faculty Forums was held to collect data from various stakeholders regarding potential curriculum revisions:

- Faculty Forum on Semesters 1 and 2
- Faculty Forum on Semesters 3 and 4
- Faculty Forum on Semesters 5 and 6
- Faculty Forum on Semesters 7, 8, and 9
- Faculty Forum on Professional Development
- Faculty Forum on Clinical Experiences

In Fall 2006, a series of “town meetings” were held to discuss each year of the curriculum to investigate the horizontal and vertical integration of the curriculum between years of the curriculum and between departments (n=3) responsible for the DVM curriculum.

In Spring 2008, two “town meetings” were held to discuss a proposed curriculum revision before it was voted on in a College faculty meeting.

The College collects and uses the following assessments on an annual basis (unless a different interval is specified below):

#### Quantifiable metrics:

- # 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>d</sup>, and 4<sup>th</sup> year students (and their demographics)
- Attrition (absolute and relative)
- Median/mean GPA by class
- Standardized test scores: (4<sup>th</sup> year scores on the NAVLE)
- # 4<sup>th</sup> year students with fellowships, internships, residencies
- # 4<sup>th</sup> year students employed at graduation

## Mean debt prior to and subsequent to graduation

- 1<sup>st</sup> year class meeting/exit interview with College leadership in late spring (Dean, Associate Deans, Assistant Deans, Department heads)
- 2<sup>nd</sup> year class meeting/exit interview with College leadership in late spring
- 3<sup>rd</sup> year class meeting/exit interview with College leadership in late spring
- 4<sup>th</sup> year class meeting/exit interview with College leadership in late spring
- 4<sup>th</sup> year student exit interviews (n = ~32 students, or ~1/3 of the senior class)

Surveys of graduates at 1, 3, and 5 years post-graduation

Surveys of employers at 1, 3, and 5 years post-graduation

In response to students' requests (during end-of-the-year interviews) to have more input into performance of non-veterinarians and non-faculty, the Dean's Office surveyed students in Spring 2008 to assess the performance, value, helpfulness, and proficiency of staff members in each year of the curriculum and in the various support offices such as the Office of Academic and Student Affairs. Results of these surveys have already been distributed to the various support or departmental offices in order to advise them about how to improve student satisfaction and service in these critical areas.

In response to various stakeholders (students, faculty, graduates, employers), the Office of Academic and Student Affairs instituted in Spring 2008 a lengthy detailed survey of 3<sup>rd</sup> and 4<sup>th</sup> year students regarding clinical proficiencies (Clinical Proficiency Self-Assessment) to gather data regarding students' perceptions of their experiences in learning clinical skills during the 4<sup>th</sup> year. By having students complete the survey twice, before and after their 4<sup>th</sup> year of clinics, it is hoped that pre- and post-comparisons will reveal areas where faculty need to assess and revise curriculum in order to provide better, more practical, more hands-on experiences for 4<sup>th</sup> year students on clinical rotations.

**(b) STUDENT OUTCOMES: List Unit's student learning outcomes (knowledge, skills, and attitudes).**

**Outcome 1. Improved knowledge and skills in the DVM Graduate (mediated by a complete DVM curriculum revision):** In response in part to outcomes data collected over the last 10 years, the DVM curriculum is undergoing a radical revision. The College Courses and Curriculum Committee, plus a specially-appointed *ad hoc* advisory group, has been charged with addressing all of the American Veterinary Medical Association's Council On Education (COE) recommendations for the curriculum and outcomes assessment simultaneously. These groups worked tirelessly in 2006-2007 to develop a viable curriculum revision which was passed by unanimous vote of the College faculty on May 22, 2007. At that time, the revision was sent to each department's Courses and Curriculum Committee to report back in detail by September 2007 on how each department intended to meet the requirements of the new curriculum for the courses taught in that department.

In summer and fall of 2007, a more vigorous curriculum proposal (the Illinois Integrated Professional Curriculum) arose and received considerable support from administrators, faculty, and students. In order to give this second proposal “equal time,” the Dean appointed a small *ad hoc* subcommittee of the College Courses and Curriculum Committee to study this proposed revision and report back to him by mid-November 2007. That subcommittee has met numerous times and presented a detailed proposed curriculum revision on January 14, 2008 to the College Course and Curriculum Committee and other interested stakeholders. The proposal was very well received at two College-wide “town meetings” to explain the proposal to the faculty, staff, and students before it was subjected to a successful vote of the College faculty on April 9, 2008.

**Outcome 2. Improved clinical skills proficiency in the DVM Graduate (measured by Clinical Proficiency Self-Assessment by 3<sup>rd</sup> and 4<sup>th</sup> Year Students)** (see above)

**Outcome 3. Improved 4<sup>th</sup> year student attitudes regarding grading procedures on clinical rotations:** Exit interviews with 4<sup>th</sup> year students (and many faculty members) routinely demonstrated frustration and dissatisfaction with subjective and perhaps sometimes arbitrary or even capricious grading on clinical rotations. Everyone (faculty and students) seemed to agree on what constituted “failure” on senior clinics, but differentiating between As, Bs, and Cs seemed subjective at best. Faculty voted on February 27, 2008 to change all clinical rotations to Satisfactory/Unsatisfactory grading rather than letter grading. This change has been endorsed by the Provost’s Office and the Senate Education Policy Committee and was enacted for all senior clinical rotations beginning on April 28, 2008.

**(c) MEASURES AND METHODS USED TO MEASURE OUTCOMES:**

**Outcome 1. Improved knowledge and skills in the DVM Graduate (mediated by a complete DVM curriculum revision):** This curriculum revision will undergo further study this summer and during the next academic year to align and manage all the necessary changes to enact the revised curriculum for the 2009-2010 or 2010-2011 academic years. The College already has been working closely with the Provost’s Office in order to anticipate possible difficulties in having the revision passed by the Education Policy Committee of the Faculty Senate.

The new proposal involves inclusion of DVM students into clinical rotations much earlier than the current 4<sup>th</sup> year. Pre-clinical courses are integrated with one another more fully to allow more clinical relevance and less redundancy than in the current curriculum. This proposal, if adopted, will be a radical departure from the current curriculum and will position UIUC in the forefront of veterinary education nationally and internationally.

**Measures 1:** Improved student satisfaction and confidence during exit interviews of each class, improved NAVLE scores, improved employer and post-graduate satisfaction

**Outcome 2. Improved clinical proficiency in the DVM Graduate (measured by Clinical Proficiency Self-Assessment by 3<sup>rd</sup> and 4<sup>th</sup> Year Students):** Further revision of the curriculum and especially of 4<sup>th</sup> year rotations will be made subsequent to collection of data which illustrate additional deficiencies in the current and especially the new curriculum.

**Measures 2:** Improved student satisfaction and confidence during exit interviews, improved NAVLE scores, improved employer and post-graduate satisfaction, improved self-reported clinical skills in the Clinical Proficiency Self-Assessment by 3<sup>rd</sup> and 4<sup>th</sup> Year Students

**Outcome 3. Improved 4<sup>th</sup> year student attitudes regarding grading procedures on clinical rotations:** This new grading system began on April 28, 2008. A new grading measurement rubric has been devised and disseminated to all clinical faculty members.

**Measures 3:** Improved student satisfaction during 4<sup>th</sup> year exit interviews

### **SECTION 3: PLANS FOR USING RESULTS**

- **PLANS: Brief description of plans to use assessment results for program improvement.**

As a result of its accreditation visit in 2006, the AVMA COE charged the College Courses and Curriculum Committee and the Office of the Associate Dean for Academic and Student Affairs with greater oversight responsibility of curriculum and outcomes assessments. The Dean has created and hired a new Assistant Dean for Curriculum who is now housed in the Office of the Associate Dean for Academic and Student Affairs. She is intimately involved in the current curriculum revision process and will continue to guide that process in the next couple of years while the new curriculum is devised and implemented. The Associate and Assistant Deans will continue to perform outcomes assessments in the same manner as in previous years, in order to allow pre- and post-revision comparisons of exit interview, survey, and objective test score data to assess the efficacy of the new curriculum in addressing its objectives. If outcomes data identify areas of deficiency (e.g. the measures described in Outcome #2 show that certain techniques or clinical skills are never taught effectively during the 4<sup>th</sup> year of the curriculum), then the curriculum will be modified to include these techniques or skills in either a Clinical Skills Laboratory, in a live-animal laboratory, or in the 4<sup>th</sup> year clinic rotations.

- **TIMELINE FOR IMPLEMENTATION:**

The timelines for the various measures are outlined above.