

## Program Development Plan

October 27, 2009

College of Veterinary Medicine Merged Graduate Program

*“Comparative and Veterinary Medicine”*

1. Designation of the new degree program, rationale for that designation, and brief description of the purpose.

***Designation:***

Name: Comparative and Veterinary Medicine

Nature of proposal: Revision of current degree program

Degree title: MS and PhD

Implementation date: Winter 2010

Academic unit responsible for administering the degree program: College of Veterinary Medicine

***Rationale:***

The proposed Comparative and Veterinary Medicine doctoral program at OSU will fill a widening gap in medicine as described by the National Academies, *Critical Needs for Research in Veterinary Medicine*, by providing comprehensive training to DVM and non-DVM scientists focusing on the commonality of animal and human disease in molecular medicine, infectious disease, immunology, cancer, physiology, pharmacology, epidemiology, genetics and many other areas of research. The proposed program is truly unique not only because of the general need for researchers in comparative and veterinary medicine but because we are structuring our program around the needs of the government, corporations and universities that hire our graduates.

A worldwide awareness of the close interconnections between human and animal health has grown in the past two decade because of the numerous highly publicized incidences of disease transmission between animals and people. Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome, “mad cow” disease, Severe Acute Respiratory Syndrome, West Nile virus, methicillin-resistant *Staphylococcus aureus* are just a few examples that are widely known by the lay public. In fact, the majority of human pathogens are zoonotic where more than 1400 disease-causing agents are known to infect both people and other animals. Out of this awareness has come a renewed interest in the concept of One Medicine-One Health, focused on common origins and mechanisms of disease between humans and other animals. Animals are subject to the same cancers as people. Just like people, animals have allergies, arthritis, diabetes, orthopedic, neurological, and

genetic diseases; and in most cases, these diseases have similar etiologies to their human counterparts.

Today researchers realize that a great deal can be learned by studying naturally occurring animal diseases. In many cases, animal disease is more readily available and easier to access than the human counterpart. Due to a century of controlled breeding, the genes of dogs are much less variable than humans making the quest for genetic connections with diseases like cancer and neurodegenerative diseases more easily studied in dogs. In addition, results from field studies conducted in the animals' natural environment, rather than under experimental conditions, are more realistic and more readily transferable to the end-users of the information, such as veterinarians and food animal producers.

Currently, the College of Veterinary Medicine (CVM) has three interrelated graduate programs, one from each of the three departments. The three Doctoral programs are being reorganized to form a single program covering the areas of comparative, translational and population medicine. By vote of the CVM faculty, the merged program has been named *Comparative and Veterinary Medicine*. Our internal assessment of the three graduate programs in Veterinary Biosciences, Preventive Medicine and Clinical Sciences found strategic elements in each program that when combined have greater value than the individual parts. Specifically, the merger allows individual focus areas (e.g., microbiology, oncology, population medicine, etc.) to be pursued in a cross disciplinary manner within a single program. As such, students of the merger program can receive an education that assimilates molecular and cellular bench-top research, applied animal research, laboratory animal research, and translational research in the medical and bioengineering sciences. Graduate students may be part of collaborative projects involving faculty outside the CVM, particularly in the health sciences, physical sciences, or agriculture. Animal-based research is the nexus and focal point of translation of all basic research for human application representing the One Medicine-One Health concept that bridges veterinary and human medical sciences. Equally important is the commitment to offer clinical research and epidemiologic field studies related to agricultural and companion animal populations, the outcomes of which can be transferred directly to the field for the benefit of our colleagues, patients, clients, agricultural constituents and public health.

**Description:**

The goals of the merged graduate program are:

- To prepare research scientists for careers in academia, government, and industry through didactic course offerings and research in field and/or laboratory settings.
- To establish an educational program that emphasizes cross disciplinary research contributing to improvement of animal and human health.

- To nurture education in translational and population medicine as it applies to discoveries in basic science and progression to clinical application.
- To assist young scientists in acquiring skill sets in experimental medicine, grantsmanship, scholarship and project management that will prepare them to assume leadership roles in academia, research institutes and the biomedical industry.

The graduate program at The Ohio State University College of Veterinary Medicine offers a unique approach to advanced training of professional and graduate students leading to MS and PhD degrees in preparation for careers in biomedical, clinical, and field-based epidemiological research. Significant need exists at the national and international levels for skilled scientists who are trained in modern translational research methods to apply advances in medicine to improve animal and human health. Recognizing the commonality between human and animal medicine, translational research at the College of Veterinary Medicine is at the forefront of advancing discoveries in basic research that can be taken from the field, clinic, or laboratory bench and applied to the patient's bedside and to the population as a whole. Upon graduation from our program, students will have gained an understanding of hypothesis-based research and the training necessary to pursue a variety of careers in academia, government, and industry.

***Program Strengths:***

- Interdisciplinary program targeting both veterinary and non-veterinary students with an interest in animal models of disease and animal and human health
- Flexible curriculum with multiple specialty tracks tailored to student interests
- Successful job placement and board passage rate for program graduates
- Outstanding multi-disciplinary research with emphasis on epidemiology, infectious disease, oncology, orthopedics, and other clinical and translational research topics
- Leading-edge resources supporting biomedical imaging, cell phenotyping, cytometry, immunology, molecular biology, and population-based modeling
- Strong emphasis on clinical research with a focus on translational medicine through clinical trials and observational and epidemiologic studies.
- Integrated approach to training that emphasizes “One Medicine-One Health” in conjunction with the OSU Center for Clinical and Translational Science funded by the NIH CTSA

2. Describe the proposed curriculum

The Comparative and Veterinary Medicine graduate program is structured into Areas of Emphasis (Graduate Specialization), each of which will have common and unique course requirements. These Areas of Emphasis will be proposed to the Graduate School as “Graduate Specializations” and will be recognized as such on the student’s diploma. It is anticipated that the number of Areas of Emphasis will increase as the program matures. Initially, the course requirements for two focus

areas (Pathology and Population Medicine) are provided. Areas of Emphasis in development include Translational Medicine and Zoonotic Diseases. Areas of Emphasis (Graduate Specialization) will require approval through the Graduate School by their normal application process.

### **AREAS of EMPHASIS**

#### **Pathology**

All of the following:

|   |              |
|---|--------------|
| <b>VBS 810-812 (813-815)</b> - Advanced Systemic Pathology  | 3-5 credits  |
| <b>VBS 718</b> - Advanced Gross Pathology                   | 1-5 credits  |
| <b>VBS 815</b> - Veterinary Surgical Pathology              | 3-5 credits  |
| <b>VBS 739</b> - Laboratory Medicine                        | 1-10 credits |
| <b>VBS 800</b> - Seminars in Veterinary Pathology           | 1-2 credits  |
| <b>VBS 795</b> - Seminars in Diagnostic Veterinary Medicine | 1-10 credits |

#### **Population Medicine**

Any two courses from the following list of **veterinary preventive medicine** courses:

|   |           |
|---|-----------|
| <b>VPM 700</b> - Molecular Epidemiology (Sp)  | 3 credits |
| <b>VPM 721</b> - Epidemiology of zoonoses and diseases common to animals and humans (A)           | 4 credits |
| <b>VPM 722</b> - Food-borne diseases, food animal production systems and food safety (W)          | 4 credits |
| <b>VPM 723</b> - Biosecurity, environmental health and other veterinary public health topics (Sp) | 4 credits |
| <b>VPM 796.02</b> - Prevention of Communicable Diseases (A)                                       | 3 credits |

Any one of the following **epidemiology and/or statistics** courses (or equivalent)

|   |           |
|---|-----------|
| <b>PUBHBIO 701</b> - Design and Analysis of Studies in the Health Sciences I  | 4 credits |
| <b>PUBHBIO 702</b> - Design and Analysis of Studies in the Health Sciences II | 4 credits |
| <b>PUBHEPI 710</b> - Principles of Epidemiology                               | 4 credits |
| <b>PUBHEPI 711</b> - Epidemiology I   | 4 credits |
| <b>PUBHEPI 712</b> - Epidemiology II  | 4 credits |
| <b>STAT 528</b> - Data Analysis I   | 3 credits |
| <b>STAT 529</b> - Data Analysis II  | 3 credits |
| <b>STAT 530</b> - Data Analysis III   | 4 credits |
| <b>VETCLIN 801</b> - Research Methods II                                      | 3 credits |

Any one of the following microbiology related courses (or equivalent)

|  |           |
|--|-----------|
| <b>M 520</b> - General Microbiology I (Au, Sp)         | 6 credits |
| <b>M 521</b> - General Microbiology II (Wi)            | 6 credits |
| <b>M 524.01</b> - Mechanisms of Microbial Disease (Sp) | 4 credits |
| <b>M 636</b> - Food Microbiology (Au, Sp)              | 5 credits |
| <b>M 649</b> - Introductory Virology (Wi)              | 5 credits |
| <b>M 522</b> -Immunobiology (Wi)                       | 5 credits |

**General Requirements****Didactic Courses:**

CVM graduate students may take courses outside of the College as a part of their degree program. Students whose research involves topics such as Biochemistry, Epidemiology, Immunology, Microbiology, Oncology, Pharmacology, or Virology will enroll for courses in other departments as directed by their advisor. Based on past enrollment patterns, the number of credit hours taken outside the CVM will range from 3 to 24 credits, with most student taking three or four non-CVM courses during their first and second years of the program. The following list of non-CVM courses are those most often taken our graduate students. A complete list of courses accepted by the CVM Council for Graduate Studies is shown in Appendix B.

|  |            |
|--|------------|
| <b>Biochem 702</b> - Molecular Genetics: Regulation of Gene Expression         | 3 credits  |
| <b>IBGP 701.05 and 702.05</b> - Biology of Human Disease                       | 10 credits |
| <b>IBGP 805</b> - Research Techniques and Resources                            | 6 credits  |
| <b>MG 601</b> - Eukaryotic Molecular Genetic Lab (W)                           | 5 credits  |
| <b>MG 602</b> - Eukaryotic Cell and Developmental Biology Lab                  | 5 credits  |
| <b>MG 701</b> - Molecular Genetics: DNA Transaction                            | 3 credits  |
| <b>MG 705</b> - Advances in Cell Biology (W)                                   | 3 credits  |
| <b>PUBH-EPI 710</b> - Principles of Epidemiology                               | 4 credits  |
| <b>PUBH-EPI 711</b> - Epidemiology 1   | 4 credits  |
| <b>PUBH-BIO 701</b> - Design and analysis of studies in the health sciences I  | 4 credits  |
| <b>PUBH-BIO 702</b> - Design and analysis of studies in the health sciences II | 4 credits  |
| <b>PUBH-BIO 702</b> - Biostatistics  | 4 credits  |
| <b>VBS 715</b> - Applied Veterinary Medical Virology (Sp)                      | 3 credits  |
| <b>VBS/MG/MCB 880.07</b> - Gene Expression Seminar                             | 3 credits  |

**Seminar Presentation:**

Students must give a public seminar presentation of their research once every other year after their first year in the program. Students must give a final one-hour research presentation within two quarters of graduation.

**Candidacy Exam:**

The format of the candidacy exam is chosen by the student's Advisory Committee and rules describing this are outlined in more detail in the College Graduate Handbook. PhD committees should consist of four faculty members as required by the graduate school.

**Final Examination:**

The format and guidelines for conducting Masters thesis and PhD dissertation defenses are outlined in the College Graduate Handbook.

**Annual Review:**

All students, along with their advisor, must complete an annual academic review which is examined by the Graduate Studies Committee to assess the students' progress to degree. The annual reviews will contain information about the student's goals, course plan, composition of advisory committee (or changes to), status of mandatory departmental presentations, status of candidacy exam (plan), tentative

teaching responsibilities (if any), clinical responsibilities (if any), presentations at local, national or international conferences, and information about any awards, publications, or accomplishments during the past year.

***Responsible Research Practices Compliance:***

No student may work in laboratories or with animals until they have received applicable training in the following categories:

Animal Usage Orientation and Training – Online Course  
Occupational Health and Safety Training – Online Course  
Occupational Health Risk Assessment  
Conflict of Interest Screening/Disclosure  
OSHA Blood-borne Pathogen Training  
Biosafety Level 2 and 3 Practices  
Collaborative Institutional Training Initiative  
Responsible Conduct of Research  
Good Clinical Practice  
Laboratory Safety

3. Administrative arrangement for the proposed program: department and school or college involved

The CVM merged graduate program is a College-wide program administered through the CVM Office of Research and Graduate Studies. The CVM Council for Graduate Studies (CFGS) will serve as the Graduate Studies Committee and have oversight of the college graduate program. The CFGS is governed by a charter voted and approved by the faculty of the College of Veterinary Medicine. The CFGS has composed a Graduate Handbook for the merged program. The CFGS is composed of nine Graduate Faculty, three from each department, elected by their peers and chaired by a faculty member of the Council. The Associate Dean for Research and Graduate Studies is a non-voting member of the Council. A College level Graduate Studies coordinator, who works out of the Office of Research and Graduate Studies, will manage all graduate student issues. The coordinator is assisted by designated staff members from each of the three departments.

4. Evidence for the need for the new degree program

Revision of the CVM doctoral program to increase the cross-disciplinary educational environment is in response to the unmet need discussed in several reports by the National Academies and referred to in the External Review of two of our departments (VBS and VCS). In summary, the failure to produce adequate numbers of veterinarian scientists is impacting academia, where there are inadequate numbers of veterinarians with advanced doctoral degrees to fill open faculty positions. Equally in demand are important positions in corporations particularly in the pharmaceutical industry (discovery through safety assessment, and mechanistic pathobiology). Corporations have shown their concern about inadequate sources of

skilled scientists by directly funding programs within select universities. OSU has received a number of these fellowships. Government also lacks adequate senior-level veterinarian scientists to meet the needs of Food and Drug Administration, United States Department of Agriculture, National Institutes of Health and Homeland Security, which are at a critical national level. The National Academies report “estimates [that] 658 additional [post DVM] graduates need to matriculate each year in all disciplines to meet the needs of public practice.” (*Critical Needs for Research in Veterinary Science*, National Academies Press, 2005 pp 154-155).

OSU is unique, with the exception of the University of Minnesota, in having Colleges of Medicine, Veterinary Medicine, Pharmacy, Public Health, Dentistry and Optometry on the same campus. Only seven universities in North America have both colleges of medicine and veterinary medicine on the same campus. OSU is among five of the thirty universities with Clinical and Translational Science Awards (CTSA) that have Colleges of Veterinary Medicine. Comparative and translational medicine, as well as epidemiology, which cross the boundaries of animal and human medicine, are of interest to all of the medical colleges. Therefore, the OSU College of Veterinary Medicine is uniquely positioned to expand its program in comparative, translational and population medicine in a way that few other universities are able.

The merged doctoral program in the College of Veterinary Medicine (CVM) is perfectly aligned with the six strategies that define Ohio State’s Academic Plan and the signature programs of the College of Medicine. The second OSU strategy to “develop academic programs that define Ohio State as the nation’s leading public land-grant university” is where the College of Veterinary Medicine will perhaps have its greatest impact and play an essential role for the University as a whole. The CVM is the only veterinary school in the State of Ohio. The doctoral program in veterinary medicine is essential for ensuring animal health, production and welfare, and public health and it contributes to biomedical, as well as corporate and government research. The land-grant mission dictates that this essential graduate program must be present and of a quality and size to fulfill the needs of the state and the nation.

As described above, the departmental PhD programs in the College of Veterinary have produced high quality graduates for decades. Merging the three graduate programs into one will have added value by creating an environment for cross disciplinary training and promotion of translational medicine.

5. Prospective enrollment

Initially, we anticipate that our student population will mirror our current breakdown, which can be summarized as follows:

|                          | <b>MS</b> | <b>PhD</b> |
|--------------------------|-----------|------------|
| With DVM                 | 43        | 50         |
| Non-DVM                  | 3         | 15         |
| Combined Degree (DVM/MS) | 5         | 1          |

|                      |           |            |
|----------------------|-----------|------------|
| <b>TOTAL</b>         | <b>51</b> | <b>66</b>  |
| <b>Overall Total</b> |           | <b>117</b> |

| <b>Demographics</b>    | <b># of Students</b> |
|------------------------|----------------------|
| Women                  | 82                   |
| Men                    | 35                   |
| International Students | 41                   |
| Residents & Interns    | 63                   |

Over time, we predict an increase in domestic, non-DVM students entering our program. This difference will be attributed to recruitment efforts that will draw undergraduate students from Ohio and across the nation, to the opportunities offered by the Graduate Program in Comparative and Veterinary Medicine. At the same time, we will increase our efforts to attract top post-DVM graduates to the program understanding that the pool of post-DVM pursuing PhD degrees is generally small and highly sought after.

6. Special efforts to enroll and retain minority students and women, if women are considered an underrepresented group in the given discipline

The number of women with careers in Veterinary Medicine has undergone a dramatic shift over the past 20 years to the point where women represent 70-80% of veterinary medical school classes. The number of women faculty in veterinary schools lags behind their class representation primarily because of the overwhelming numbers of men in these career positions. As men retire from faculty positions, a fair proportion is being filled by women. This pattern also is true of DVM PhD students entering the graduate program. The lack of minority faculty in Colleges of Veterinary Medicine is a nation-wide problem that is confounded by relatively few minority applicants entering the DVM degree program. Recruitment of minorities in PhD programs that will prepare them for faculty positions is major goal of this merged program. Several initiatives are underway to improve both the number of minorities entering veterinary medicinal school and the CVM PhD program. Part of our effort is to visit and aggressively recruit at colleges populated by a high percentage of minorities. Part of the effort is to establish and enhance the environment at OSU to support the recruitment effort. Finally, we are developing relationships with faculty at minority-dominated institutions that will help direct undergraduate students to the DVM and or PhD programs. Ultimately, our success will depend on a robust post-DVM minority pool that we can draw from to fill PhD slots in our merged graduate program.

7. Faculty and facilities available for the new degree program and their adequacy

**Faculty:**

Currently the College of Veterinary Medicine has 43 faculty with P graduate status and eight (mostly young faculty) with M graduate status. An additional 11 P graduate faculty from colleges outside of Veterinary Medicine are approved to serve as



graduate advisors for graduate students in the Comparative and Veterinary Medicine program. Appendix A lists these faculty and their affiliation.

***Facilities/Equipment Requirements:***

The facilities and equipment utilized in the graduate program extend across the college and include 47,256 square feet of research laboratory space, the veterinary teaching hospital, 28,300 square feet of laboratory animal space (ULAR) within the college, the College of Veterinary Medicine library, 7,033 sq ft of graduate office space holding 117 graduate students, as well as resources located at the OARDC facility near Wooster, Ohio. Since the merged graduate program is an outgrowth of three existing graduate programs, which already use these spaces and facilities, the use of these facilities should not affect other programs.

8. Need for additional facilities and staff along with the plans for meeting this need

Since the merged graduate program is an outgrowth of three existing graduate programs that have existing staff and already use University resources, there should be no additional requirements resulting from the merger. The CVM merged graduate program will allow the opportunity for consolidation of seminars that target graduate students. Seminar participation will be required for all graduate students. However, the merged graduate program will permit students to attend and present in a choice of seminar settings.

9. Projected additional cost associated with the program and adequacy of expected subsidy and other income to meet this cost

As stated above, because the merged graduate program is an outgrowth of three existing graduate programs, there should be no additional costs resulting from the merger.

10. Information about the use of consultants or advisory committees in development of the degree program proposal, with copies of reports from such consultants or advisory committees

The need to reorganize the three graduate programs in the College of Veterinary Medicine into one was identified in our 2006 Strategic Planning process as a goal that now has been expedited by the university-wide changes initiated by the Provost and Dean of the Graduate School to improve the quality of the OSU graduate programs and to improve services and infrastructure offered to graduates students. The development of the Comparative and Veterinary Medicine merged graduate program is being led by the Associate Dean for Research and Graduate Studies through an interactive process with the current graduate studies chairs and members of the three individual graduate studies committees of the college. The committee seeks information from a variety of sources including other universities, corporations, and government to develop the most effective training program possible.

## APPENDIX A

Courses approved for inclusion in the Comparative and Veterinary Medicine  
graduate curriculum

### STATISTICS courses

|                                 |  |             |
|---------------------------------|--|-------------|
| <b>MG 650</b>                   | Analysis and Interpretation of Biological Data     | 3 credits   |
| <b>Statistics 641</b>           | - Design and Analysis of Experiments               | 3 credits   |
| <b>Statistics 528 &amp; 529</b> | - Data analysis I and II                           | 3 credits   |
| <b>AGR EDU 887</b>              | Analysis and Interpretation of Data,               | 3 credits   |
| <b>AE 888</b>                   | Instrumentation and Procedures for Data Collection | 3 credits   |
| <b>PHBIO 701</b>                | Design and Analysis I                              | 4 credits   |
| <b>PHBIO 702</b>                | Design and Analysis II                             | 4 credits   |
| <b>PHBIO 703</b>                | A Problem-Oriented Approach to Biostatistics       | 4 credits   |
| <b>PHBIO 794</b>                | Group Studies in Biometrics                        | 2-5 credits |

### ***OTHER COURSES LISTED ALPHABETICALLY BY DISCIPLINE*** ***Some courses may be listed twice if covering two different areas***

#### AGRICULTURE COURSES

|                  |   |           |
|------------------|---|-----------|
| <b>AE 885</b>    | Research Methods (Au,Wi,Su)                 | 3 credits |
| <b>AE 886</b>    | Research Design (Wi,Sp,Su)                  | 3 credits |
| <b>AE 887</b>    | Data Analysis and Interpretation (Au,Sp)    | 3 credits |
| <b>AS 616</b>    | Poultry Physiology (Sp)                     | 5 credits |
| <b>AS 617</b>    | Physiology of Lactation (Au)                | 3 credits |
| <b>AS 650</b>    | Advanced Meat Technology (Sp)               | 3 credits |
| <b>AS 655</b>    | Laboratory Analysis of Meat Products (Wi)   | 5 credits |
| <b>AS 656</b>    | Eggs and Poultry Products Technology (Au)   | 5 credits |
| <b>AS 660</b>    | Quality Control Interpretation (Sp)         | 3 credits |
| <b>AS 710</b>    | Advanced Reproductive Physiology (Sp)       | 4 credits |
| <b>AS 730</b>    | Animal Physiology and Nutrition (Au,Wi,Sp)  | 3 credits |
| <b>AS 740</b>    | Principles of Toxicology I (W)              | 3 credits |
| <b>AS 741</b>    | Principles of Toxicology II (Sp)            | 5 credits |
| <b>AS 850</b>    | Food and International Agriculture (Su)     | 5 credits |
| <b>AS 890</b>    | Seminars                                    | 1 credit  |
| <b>AS 810.02</b> | Endocrinology of Reproduction (Wi)          | 5 credits |
| <b>AS 810.03</b> | Immunology and Immunogenetics (Sp)          | 5 credits |
| <b>AS 830</b>    | Advanced Studies in Nutrition               | 3 credits |
| <b>ECON 711</b>  | Production and Consumption (Au)             | 4 credits |
| <b>ECON 712</b>  | Finance and Risk Management (Wi)            | 4 credits |
| <b>ECON 713</b>  | Public Policies and Market Regulations (Sp) | 4 credits |
| <b>FS 611</b>    | Cheese and Fermented Foods (Wi)             | 4 credits |
| <b>FS 636</b>    | Food Microbiology (Au,Sp)                   | 5 credits |
| <b>FS 736</b>    | Advanced Food Microbiology                  | 3 credits |
| <b>FS 761</b>    | Advanced Nutritional Utilization I (Wi)     | 5 credits |
| <b>FS 762</b>    | Advanced Nutritional Utilization II (Sp)    | 5 credits |
| <b>VBS 716</b>   | Diseases of Poultry and Game Birds (Au,Wi)  | 3 credits |

#### BIOCHEMISTRY

|                    |  |           |
|--------------------|--|-----------|
| <b>Biochem 511</b> | Introduction to Biological Chemistry (Au,Wi,Sp,Su) | 5 credits |
|--------------------|--|-----------|

|                        |   |           |
|------------------------|---|-----------|
| <b>Biochem 613-615</b> | Biochemistry and Molecular biology (Au,Wi,Sp) | 4 credits |
| <b>Biochem 708</b>     | Proteins (Su)                                 | 4 credits |
| <b>Biochem 761</b>     | Advanced biochemistry of proteins (Au)        | 3 credits |
| <b>Chem 661</b>        | Biochemistry (Au,Wi)                          | 3 credits |

#### **BIOMEDICAL ETHICS**

|                    |   |           |
|--------------------|---|-----------|
| <b>VBS 751</b>     | Professional and Ethical Issues in Biosciences (Su) | 1 credit  |
| <b>Surgery 814</b> | Responsible Conduct of Research                     | 2 credits |

#### **ENTOMOLOGY**

|                 |                                   |             |
|-----------------|-----------------------------------|-------------|
| <b>ENT 661</b>  | Medical Entomology (Wi)           | 5 credits   |
| <b>ENT 694</b>  | Group Studies                     | 2-5 credits |
| <b>ENT 795D</b> | Special Topics                    | 1-3 credits |
| <b>ENT 870</b>  | Medical Veterinary Acarology (Su) | 4 credits   |

#### **ENVIRONMENTAL HEALTH**

|                   |   |           |
|-------------------|---|-----------|
| <b>PHEPI 713</b>  | Epidemiology in Environmental Health (Au) | 4 credits |
| <b>PHENV 731</b>  | Principles of Environmental Health (Wi)   | 4 credits |
| <b>VPM 796.05</b> | Environmental Sanitation (Sp)             | 3 credits |
| <b>M 634</b>      | Water Microbiology (Wi)                   | 3 credits |

#### **EPIDEMIOLOGY**

|                  |   |           |
|------------------|---|-----------|
| <b>VPM 780</b>   | Veterinary Epidemiology (Wi)              | 3 credits |
| <b>VPM 810</b>   | Principles of Epidemiology (Wi)           | 2 credits |
| <b>PHEPI 711</b> | Epidemiology I (Wi)                       | 4 credits |
| <b>PHEPI 712</b> | Epidemiology II (Sp)                      | 4 credits |
| <b>PHEPI 713</b> | Epidemiology in Environmental Health (Au) | 4 credits |

#### **IMMUNOLOGY**

|                    |   |           |
|--------------------|---|-----------|
| <b>MB 701</b>      | Cellular and Molecular Immunology (Au)  | 5 credits |
| <b>IBGP 703.02</b> | Host Defense                            | 3 credits |
| <b>VBS 717</b>     | Current Topics of Veterinary Immunology | 3 credits |
| <b>MB 723.01</b>   | Molecular Immunology (Wi)               | 3 credits |
| <b>MVIMG 833</b>   | Current Immunological Techniques (Wi)   | 4 credits |

#### **LABORATORY ANIMALS**

|                            |   |           |
|----------------------------|---|-----------|
| <b>MCB 781</b>             | Animal Models of Human Disease (Au)             | 1 credit  |
| <b>VBS 693</b>             | Laboratory Animal Medicine (Niewiesk's section) | 2 credits |
| <b>MG 700</b>              | Systems of Genetic Analysis (Au)                | 3 credits |
| <b>Animal Sciences 868</b> | Molecular Bio Techniques (Su)                   | 5 credits |

#### **MICROBIOLOGY**

|                  |  |           |
|------------------|--|-----------|
| <b>M 509</b>     | Basic and Practical Microbiology (Au,Wi,Sp,Su) | 5 credits |
| <b>M 520</b>     | General Microbiology I (Au,Sp)                 | 6 credits |
| <b>M 521</b>     | General Microbiology II (Wi)                   | 6 credits |
| <b>M 522</b>     | Immunobiology (Wi)                             | 5 credits |
| <b>M 524.01</b>  | Mechanisms of Microbial Disease (Sp)           | 4 credits |
| <b>MVIMG 600</b> | Evolution of Emerging Viruses (Sp)             | 2 credits |
| <b>M H610</b>    | Bioinformatics & Molecular Microbiology (Sp)   | 5 credits |
| <b>M 632</b>     | Cellular Aspects of the Immune Response (Au)   | 6 credits |
| <b>M 634</b>     | Water Microbiology (Wi)                        | 5 credits |
| <b>M 636</b>     | Food Microbiology (Au, Sp)                     | 5 credits |

|                 |   |           |
|-----------------|---|-----------|
| <b>M 647</b>    | Eukaryotic Pathogens (Au)                             | 3 credits |
| <b>M 649</b>    | Introductory Virology (Wi)                            | 5 credits |
| <b>M 655</b>    | Animal Cell Culture Techniques (Au)                   | 5 credits |
| <b>M 661</b>    | General Physiology (Wi)                               | 5 credits |
| <b>M 664</b>    | Medical Ecology (Au)                                  | 3 credits |
| <b>M 665</b>    | Environmental Microbiology (Sp)                       | 3 credits |
| <b>MB 680</b>   | Advanced Microbial Genetics (Wi)                      | 3 credits |
| <b>M 701</b>    | Cellular and Molecular Immunology (Au)                | 5 credits |
| <b>BC 710</b>   | Molecular Biology Laboratory (Sp)                     | 5 credits |
| <b>M 720</b>    | Microbial Biodiversity (Au)                           | 4 credits |
| <b>M 723</b>    | Molecular Immunology (Wi)                             | 3 credits |
| <b>M 724</b>    | Molecular Biology of Bacterial Pathogens (Sp)         | 5 credits |
| <b>MG 770</b>   | Molecular Genetics of Animal and Plant Viruses (Su)   | 3 credits |
| <b>M 799</b>    | Colloquium (Au,Wi,Sp)                                 | 1 credit  |
| <b>M 832</b>    | Advanced Cellular Immunology (Wi)                     | 3 credits |
| <b>VBS 754</b>  | Fundamental Virology                                  | 5 credits |
| <b>VBS 841</b>  | Viral Pathogenesis and Oncogenesis                    | 5 credits |
| <b>IBGP 795</b> | Host/Pathogen Interaction Research Seminar (Au,Wi,Su) | 1 credit  |

#### **ONCOLOGY/CANCER GENETICS**

|                  |  |           |
|------------------|--|-----------|
| <b>MG 500</b>    | General Genetics (Au,Wi,Sp,Su)                     | 5 credits |
| <b>MG 605</b>    | Molecular Genetics I (Wi)                          | 4 credits |
| <b>MG 606</b>    | Molecular Genetics II (Su)                         | 4 credits |
| <b>MG 607</b>    | Cell Biology (Au)                                  | 3 credits |
| <b>MG 608</b>    | Genes and Development (Wi)                         | 3 credits |
| <b>VBS 640</b>   | Fundamentals of Oncology (Wi)                      | 4 credits |
| <b>BC 702</b>    | Molecular Genetics (Wi)                            | 3 credits |
| <b>MG 715</b>    | Developmental Genetics (Su)                        | 3 credits |
| <b>MG 733</b>    | Human Genetics (Su)                                | 3 credits |
| <b>MVIMG 734</b> | Cancer Genetics: High-throughout Technologies (Su) | 4 credits |
| <b>MCB 831</b>   | Eukaryotic Genome (Wi)                             | 3 credits |

#### **PATHOLOGY**

|                              |  |              |
|------------------------------|--|--------------|
| <b>VBS 810-812 (813-815)</b> | Advanced Systemic Pathology                | 3-5 credits  |
| <b>VBS 718</b>               | Advanced Gross Pathology                   | 1-5 credits  |
| <b>VBS 815</b>               | Veterinary Surgical Pathology              | 3-5 credits  |
| <b>VBS 739</b>               | Laboratory Medicine                        | 1-10 credits |
| <b>VBS 800</b>               | Seminars in Veterinary Pathology           | 1-2 credits  |
| <b>VBS 795</b>               | Seminars in Diagnostic Veterinary Medicine | 1-10 credits |

#### **PHARMACOLOGY**

|                 |                      |           |
|-----------------|----------------------|-----------|
| <b>Phar 600</b> | General Pharmacology | 3 credits |
|-----------------|----------------------|-----------|

#### **PUBLIC HEALTH COURSES**

|                |   |             |
|----------------|---|-------------|
| <b>BIO 701</b> | Design and Analysis of Studies in the Health Sciences I (Au)  | 4 credits   |
| <b>BIO 702</b> | Design and Analysis of Studies in the Health Sciences II (Wi) | 4 credits   |
| <b>BIO 703</b> | Problem Orientated Approach to Biostatistics (Sp)             | 4 credits   |
| <b>BIO 794</b> | Group Studies in Biometrics                                   | 2-5 credits |
| <b>EPI 711</b> | Epidemiology I (Wi)   | 4 credits   |
| <b>EPI 712</b> | Epidemiology II (Sp)  | 4 credits   |
| <b>EPI 713</b> | Epidemiology in Environmental Health (Au)                     | 4 credits   |

**EPI 815** Infectious Disease Epidemiology (Sp) 4 credits

**VETERINARY CLINICAL SCIENCES COURSES**

**VCS 720.02** Medical Photography 2-3 credits  
**VCS 724** Advanced Nutrition 1-2 credits  
**VCS 751** Feline Internal Medicine 3 credits  
**VPM 785** Biological Research 3 Techniques 3 credits  
**VCS 790-792** Pharmacology of Cardiac Drugs 3 credits  
**VBS 790** Cardiovascular Physiology 1 credit  
**VCS 791.01** Advanced Theriogenology 3-4 credits  
**VCS 792** Equine Theriogenology Studies 1 credit  
**VCS 793** Advanced Theriogenology and Laboratory 1 credit  
**VCS 796.01** Clinical Theriogenology 1 credit  
**VCS 796.01** Advanced Topics in Equine Surgery - Soft Tissue 1 credit  
**VCS 800** Advanced Topics in Equine Surgery - Musculoskeletal 2 credits  
**VCS 800** Research Methods 2-3 credits  
**VCS 811** Advanced Veterinary Clinical Pharmacology  
**VCS 822** Advanced Veterinary Medical Sciences Courses  
**VCS 822.01** Diagnostic methods in Veterinary Internal Medicine 3 credits  
**VCS 822.02** Gastroenterology Johnson & Sherding 1 credit  
**VCS 822.03** Respiratory Medicine 1 credit  
**VCS 822.04** Neurologic and Muscular Disease 2-3 credits  
**VCS 822.05** Cardiovascular Medicine 2-3 credits  
**VCS 822.06** Nephrology and Urology 2-3 credits  
**VCS 822.07** Medical Oncology and Hematology 2-3 credits  
**VCS 822.08** Hepatology 2 credits  
**VCS 822.09** Dermatology 2 credits  
**VCS 822.10** Ophthalmology 2 credits  
**VCS 833 Sequence** Advanced Veterinary Surgical Sciences –  
**VCS 833.01** Anesthesia and Critical Care 2 credits  
**VCS 833.02** Gastrointestinal Surgery 2-3 credits  
**VCS 833.03** Respiratory and Thoracic Surgery 2-3 credits  
**VCS 833.04** Neurosurgery 2-3 credits  
**VCS 833.05** Cardiovascular & Hemolymphatic Surgery 2-3 credits  
**VCS 833.06** Renal, Urinary, & Reproductive Surgery 2-3 credits  
**VCS 833.07** Musculoskeletal Surgery 2 credits  
**VCS 833.08** Reconstructive Surgery 2 credits  
**VCS 833.09** Selected Surgical Topics 2 credits  
**VCS 850 Sequence** Seminars in Vet. Clin. Sci.  
**VCS 850.01** Anesthesia Conference 1-2 credits  
**VCS 850.02** Cardiology Conference 1-2 credits  
**VCS 850.03** Hematology - Oncology conference 1-2 credits  
**VCS 850.04** Internal Medicine Conference (CPC-Small Animal) 1-2 credits  
**VCS 850.05** Journal review: Feline Internal Medicine 1-2 credits  
**VCS 850.06** Journal review: Hematology & Oncology 1-2 credits  
**VCS 850.07** Large Animal Internal Medicine Conference 1-2 credits  
**VCS 850.08** Neurology Conference 1-2 credits  
**VCS 850.09** Surgery Conference 1-2 credits

**VETERINARY PREVENTIVE MEDICINE COURSES**

**VPM 700** Molecular Epidemiology (Sp) 3 credits

|                   |  |           |
|-------------------|--|-----------|
| <b>VPM 715</b>    | Veterinary Public Service (Au)                                       | 3 credits |
| <b>VPM 721</b>    | Epidemiology of Zoonoses (Au)  | 4 credits |
| <b>VPM 722</b>    | Food-Borne Dis., Food Animal Product. Sys. & Food Safety (Wi)        | 4 credits |
| <b>VPM 723</b>    | Biosecurity, Environmental Health and Vet. Public Health Topics (Sp) | 4 credits |
| <b>VPM 780</b>    | Veterinary Epidemiology (Wi)   | 3 credits |
| <b>VPM 796.02</b> | Prevention of Communicable Diseases (Au)                             | 3 credits |
| <b>VPM 796.06</b> | Disease Control in Dairy Cattle (Au)                                 | 4 credits |
| <b>VPM 796.12</b> | Literature of Production Medicine (Au,Wi)                            | 1 credit  |
| <b>VPM 796.13</b> | Applied Dairy Nutrition (Wi)   | 3 credits |
| <b>VPM 796.18</b> | Bovine Theriogenology (Au)   | 2 credits |
| <b>VPM 810</b>    | Principles of Epidemiology (Wi)                                      | 2 credits |
| <b>VPM 850.02</b> | Seminar in VPM-Student Presentation (Au,Sp)                          | 1 credit  |

APPENDIX B

Graduate faculty for the Comparative and Veterinary Medicine graduate program

| Home Unit                              | First Name | MI        | Last Name    | Title                               | Category | Research Area                       |
|--|------------|-----------|--------------|-------------------------------------|----------|-------------------------------------|
| Pathology                              | Rolf       |           | Barth        | Professor                           | P        | Pathology                           |
| Veterinary<br>Clinical<br>Sciences     | James      | K         | Belknap      | Associate<br>Professor              | P        | Equine Surgery                      |
| Veterinary<br>Clinical<br>Sciences     | Alicia     | L         | Bertone      | Professor                           | P        | Equine Surgery and<br>Joint Disease |
| Veterinary<br>Clinical<br>Sciences     | John       | D.        | Bonagura     | Professor                           | M        | Small Animal<br>Cardiology          |
| Veterinary<br>Biosciences              | Kathleen   | A         | Boris-Lawrie | Professor                           | P        | Molecular<br>Virology/Biology       |
| Veterinary<br>Biosciences              | Prosper    | N         | Boyaka       | Professor                           | P        | Mucosal<br>Immunity/Allergy         |
| Veterinary<br>Biosciences              | Charles    | L         | Brooks       | Professor                           | P        | Protein Structure and<br>Function   |
| Veterinary<br>Clinical<br>Sciences     | C.         | A. (Tony) | Buffington   | Professor                           | P        | Small Animal<br>Nutrition           |
| Veterinary<br>Biosciences              | Mary       | J         | Burkhard     | Associate<br>Professor              | P        | Veterinary Clinical<br>Pathology    |
| MVIMG                                  | Michael    | A         | Caligiuri    | Professor                           | P        | Genetic Basis of<br>Cancer          |
| MCDB                                   | Long-Sheng |           | Chang        | Professor                           | P        | Oncology                            |
| Pharmacy                               | Ching-Shih |           | Chen         | Professor                           | P        | Medicinal Chemistry                 |
| Veterinary<br>Biosciences              | Ian        | C         | Davis        | Assistant<br>Professor              | M        | Viral Diseases and<br>infection     |
| Veterinary<br>Preventative<br>Medicine | Fred       |           | DeGraves     | Assistant<br>Professor              | M        | Dairy Production<br>Medicine        |
| Veterinary<br>Biosciences              | James      | W         | DeWille      | Professor                           | P        | Molecular Biology                   |
| Pediatrics                             | Joan       |           | Durbin       | Professor                           | P        | Viral Pathogeneses                  |
| Veterinary<br>Preventative<br>Medicine | Maurice    |           | Eastridge    | Professor                           | P        | Dairy Cattle Nutrition              |
| Veterinary<br>Preventative<br>Medicine | Wondwossen |           | Gebreyes     | Associate<br>Professor              | P        | Food Safety                         |
| Veterinary<br>Biosciences              | Patrick    | L         | Green        | Professor                           | P        | Virology & Molecular<br>Biology     |
| Veterinary<br>Biosciences              | Robert     | L         | Hamlin       | Professor                           | P        | Cardiovascular<br>Physiology        |
| Veterinary<br>Preventative<br>Medicine | Armando    |           | Hoet         | Assistant<br>Professor,<br>Clinical | M        | Veterinary Public<br>Health         |
| Veterinary<br>Preventative             | Joseph     | S         | Hogan        | Professor                           | P        | Mastitis in Dairy<br>Cattle         |

| Home Unit  | First Name | MI | Last Name  | Title                  | Category | Research Area                                |
|--|------------|----|------------|------------------------|----------|--|
| Medicine<br>Veterinary<br>Biosciences                        | Nongnuch   |    | Inpanbutr  | Professor              | P        | Veterinary Anatomy                           |
| Veterinary<br>Preventative<br>Medicine                       | Daral      |    | Jackwood   | Professor              | P        | Molecular Virology,<br>Biotechnology         |
| Biochemistr<br>Program<br>(Ohio State)                       | Sissy      | M  | Jhiang     | Professor              | P        | Cell Signaling and<br>Cancer                 |
| Veterinary<br>Clinical<br>Sciences                           | Kenneth    | A  | Johnson    | Professor              | P        | Small Animal<br>Orthopedics                  |
| Endo,<br>Diabetes &<br>Metabolish,<br>College of<br>Medicine | Lawrence   | S  | Kirschner  | Associate<br>Professor | P        | Oncology                                     |
| Veterinary<br>Clinical<br>Sciences                           | William    |    | Kisseberth | Associate<br>Professor | M        | Oncology                                     |
| Veterinary<br>Clinical<br>Sciences                           | Catherine  | W  | Kohn       | Professor              | P        | Equine Internal<br>Medicine                  |
| Veterinary<br>Biosciences                                    | George     | S  | Krakovka   | Professor              | P        | Veterinary Pathology                         |
| Veterinary<br>Biosciences                                    | Michael    | D  | Lairmore   | Professor              | P        | Veterinary<br>Pathology/Violog<br>y          |
| Veterinary<br>Preventative<br>Medicine                       | Jeffrey    |    | LeJeune    | Associate<br>Professor | M        | Preharvest Food-<br>Borne Pathogens          |
| Veterinary<br>Clinical<br>Sciences                           | Jeffrey    |    | Lakritz    | Associate<br>Professor | P        | Food and Fiber<br>Animal                     |
| Veterinary<br>Preventative<br>Medicine                       | Chang Won  |    | Lee        | Assistant<br>Professor | M        | Molecular Virology,<br>Avian Diseases        |
| Veterinary<br>Biosciences                                    | Young Chin |    | Lin        | Professor              | P        | Reproductive<br>Endocrinology/<br>Physiology |
| Veterinary<br>Biosciences                                    | Cheryl     | A  | London     | Associate<br>Professor | P        | Small Animal<br>Oncology/<br>Hematology      |
| Pathology  | Clay       | B  | Marsh      | Professor              | P        | Inflammation/<br>Pulmonary                   |
| Veterinary<br>Biosciences                                    | Lawrence   | E  | Mathes     | Professor              | P        | Immunology,<br>Retrovirology                 |
| Veterinary<br>Clinical<br>Sciences                           | Rustin     |    | Moore      | Professor              | P        | Equine Surgery                               |
| Veterinary<br>Biosciences                                    | Stefan     |    | Niewiesk   | Associate<br>Professor | P        | Measles Virus and<br>Vaccination             |
| Veterinary   | Michael    | J  | Oglesbee   | Professor              | P        | Veterinary Pathology                         |



| <b>Home Unit</b>   | <b>First Name</b> | <b>MI</b> | <b>Last Name</b>   | <b>Title</b>           | <b>Category</b> | <b>Research Area</b>   |
|--|-------------------|-----------|--------------------|------------------------|-----------------|--|
| Biosciences<br>Veterinary<br>Biosciences                   | Lynne             | E         | Olson              | Professor              | P               | Pulmonary<br>Physiology  |
| Integrated<br>Biomedical<br>Science<br>Graduate<br>Program | Mark              | E         | Peeples            | Professor              | P               | Microbiology &<br>Immunology   |
| Physiology   | Muthu             |           | Periasamy          | Professor              | P               | Microbiology &<br>Immunology   |
| Veterinary<br>Biosciences                                  | M                 | J         | Radin              | Professor              | P               | Veterinary Clinical<br>Pathology   |
| Veterinary<br>Preventative<br>Medicine                     | Päivi             |           | Rajala-<br>Schultz | Associate<br>Professor | P               | Epidemiology   |
| Veterinary<br>Biosciences                                  | Yasuko            |           | Rikihisa           | Professor              | P               | Microbiology   |
| Veterinary<br>Biosciences                                  | Thomas            | J         | Rosol              | Professor              | P               | Veterinary Pathology;<br>Endocrine and<br>Bone Disease                         |
| Veterinary<br>Preventative<br>Medicine                     | Linda             | J         | Saif               | Professor              | P               | Immunology,<br>Molecular<br>Virology, Enteric<br>Diseases of<br>Swine & Cattle |
| Veterinary<br>Preventative<br>Medicine                     | Yehia             | M         | Saif               | Professor              | P               | Virology,<br>Immunology,<br>Avian Disease                                      |
| Veterinary<br>Preventative<br>Medicine                     | William           | J.A.      | Saville            | Professor              | P               | Epidemiology   |
| Integrated<br>Biomedical<br>Science<br>Graduate<br>Program | Larry             | S         | Schlesinger        | Professor              | P               | Microbiology &<br>Immunology   |
| Veterinary<br>Clinical<br>Sciences                         | Karsten           | E         | Schober            | Assistant<br>Professor | P               | Small Animal<br>Cardiology   |
| Veterinary<br>Preventative<br>Medicine                     | William           | P         | Shulaw             | Professor              | P               | Herd Health,<br>Extension Vet<br>Medicine                                      |
| Veterinary<br>Preventative<br>Medicine                     | Richard           | D.        | Slemons            | Professor              | P               | Avian Diseases and<br>Virology   |
| Veterinary<br>Biosciences                                  | Paul              | C         | Stromberg          | Professor              | P               | Veterinary Pathology   |
| Veterinary<br>Clinical<br>Sciences                         | Walter            | R         | Threlfall          | Professor              | P               | Small Animal<br>Theriogenology   |
| Veterinary<br>Clinical<br>Sciences                         | Ramiro            |           | Toribio            | Assistant<br>Professor | M               | Equine Internal<br>Medicine  |

| Home Unit                                      | First Name | MI | Last Name | Title               | Category | Research Area                 |
|--|------------|----|-----------|---------------------|----------|-------------------------------|
| Integrated Biomedical Science Graduate Program | Joanne     |    | Turner    | Assistant Professor | P        | Microbiology & Immunology     |
| Veterinary Clinical Sciences                   | Andreas    | F  | Von Recum | Faculty Emeritus    | P        | Biomaterials and Inflammation |
| MVIMG  | Caroline   | C  | Whitacre  | Professor           | P        | Microbiology & Immunology     |
| Veterinary Preventative Medicine               | Thomas     | E  | Wittum    | Professor           | P        | Epidemiology                  |
| Veterinary Biosciences                         | Mamoru     |    | Yamaguchi | Professor           | P        | Muscle Biology                |

**Graduate Council  
November 16, 2009  
226 University Hall  
Meeting Minutes**

**Graduate Council Members Present:**

Ana Azevedo, Enrico Bonello, Ginny Bumgardner, Hazel Morrow-Jones, Robert Perry, Ruth Peterson, Jim Phelan, John Sheridan, Ingrid Werner, Danelle Wilbraham (representing Brian Gay)

**Graduate School Staff Present:** Patrick Osmer, Ann Salimbene, Elliot Slotnick, Kathleen Wallace, Susan Reeser (recorder)

**A. Approval of Minutes**

- The minutes from the October 19, 2009, Graduate Council meeting were approved as submitted.

**B. Announcements – Dean Pat Osmer**

1. Dean Osmer will present the final reports of the Task Forces on the Life Sciences and on the Environmental Sciences and the implementation plans to the Council of Deans at their meeting on November 17. Provost Alutto will release the reports to the university after that meeting.
2. Deans Osmer and Slotnick met with top administrators from Kent State University along with Stanley Lemeshow, dean, Ohio State University College of Public Health, to discuss a proposal to develop a Master's and Ph.D. degree program in Public Health at Kent State University. The Regents Advisory Committee on Graduate Studies (RACGS) and Ohio State are reviewing the proposal to determine the strength of the program and if there is a conflict with Ohio State and other existing public health programs in the State of Ohio.
3. The Inter-University Council (IUC) Provosts will be discussing the doctoral funding formula at their November 17 meeting to establish a doctoral set-aside recommendation for a "quality improvement" category. The doctoral formula is in the first year of a ten year phase-in to a performance-based model based on degrees awarded, research grant activity, and other quality measures.
4. Dean Osmer is currently serving on the Council of Graduate Schools (CGS)/Educational Testing Services (ETS) sponsored Commission to Study the Future of Graduate Education in the United States, along with other U.S. corporate and university leaders. Dean Osmer will meet one of the other Commission members, Dr. Ronald Townsend, Executive Vice President for Global Laboratory Operations at Battelle Memorial Institute, to discuss the work of the commission and the various Battelle/Ohio State connections that are being considered.
5. The Graduate School hopes to improve international graduate student preparedness by joining in an initiative proposed by William Brustein, Vice Provost for Global Strategies and International Affairs, to institute Global Gateways in several different countries that will allow Ohio State to provide services overseas for prospective graduate students to enroll in English language courses, testing services, and new certificate and dual/joint degree programs.

## C. Business

### 1. Continuous Enrollment

The Continuous Enrollment Policy was reviewed by Council for comprehensiveness and clarity. The policy establishes a continuous post-candidacy enrollment requirement for all students admitted to Graduate School Autumn Quarter 2008 and after. All students who successfully complete the doctoral candidacy examination will be required to be enrolled in every quarter of their candidacy (summer excluded) until graduation. Concerns about leaves of absence, appeal process, and penalties for non-compliance were discussed.

- **Council members approved the policy. The policy will be noted on the Graduate School website, in the *Graduate School Handbook*, and will be communicated to graduate programs and students in the Graduate School newsletter, and in OSUToday and OSUWeekly.**

### 2. Semester Conversion

Dean Osmer reported that the Graduate School has established a graduate-oriented committee with Graduate School staff members Shari Breckenridge, Tim Watson, Ann Salimbene, Graduate Council members Hazel Morrow-Jones and Rob Perry, and Liza Toher from the Council of Graduate Students, to work together to review Graduate School policies that will be affected by Ohio State's conversion to the semester system.

Elliot explained that the semester conversion process will affect nearly everything the Graduate School does in overseeing graduate education necessitating a page-by-page review of the *Graduate School Handbook* to determine how to address each of the rules and policies. This effort is also generating a discussion about the purpose and rationale of some existing policies.

Council members felt that the university/Academic Affairs must first make some final decisions about calendar conversion before the Graduate School and graduate programs can begin making changes.

- **Council members asked that peer institutions, e.g., the CIC, be polled to determine how semester-based requirements such as enrollment, graduation, and full time status issues are handled. Dean Osmer agreed to send a query to the CIC Deans requesting comments.**

## D. Graduate Council Curriculum Committee Reports and Actions

– Theresa Early, Liaison

1. Proposal to merge the three College of Veterinary Medicine graduate programs (veterinary bioscience, veterinary clinical sciences, and veterinary preventive medicine) into a single “umbrella” program Comparative and Veterinary Medicine.
  - **Elliot Slotnick explained details of the proposal that would transform the three graduate programs into subspecialties in the new graduate program. The proposal was approved by Graduate Council and will be forwarded to the Council on Academic Affairs (CAA) for further processing.**

**The meeting was adjourned at 4:15 p.m.**