

Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).  
See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

### TRIAL COURSE OR NEW COURSE PROPOSAL

**SUBMITTED BY:**

<b>Department</b>	<b>Veterinary Medicine</b>	<b>College/School</b>	<b>CNSM</b>
<b>Prepared by</b>	<b>Cathy Griseto</b>	<b>Phone</b>	<b>474-1928</b>
<b>Email Contact</b>	<b><a href="mailto:cagriseto@alaska.edu">cagriseto@alaska.edu</a></b>	<b>Faculty Contact</b>	<b>Arleigh Reynolds, Assoc Dean Vet Med</b>

**1. ACTION DESIRED***(CHECK ONE):*

Trial Course

New Course

☒**2. COURSE IDENTIFICATION:**

Dept

**DVM**

Course #

**637**

No. of Credits

**3**

Justify upper/lower division status &amp; number of credits:

**Professional Program required course – see CSU syllabus attached****3. PROPOSED COURSE TITLE:****Veterinary Bacteriology & Mycology****4. To be CROSS LISTED?**  
*YES/NO***Yes**

If yes, Dept:

**BIOL,  
MSL**

Course #

**6XX,  
6XX**

NOTE: Cross-listing requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.

**5. To be STACKED?***YES/NO***NO**

If yes, Dept.

Course #

**How will the two course levels differ from each other? How will each be taught at the appropriate level?:**

Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi—undergraduate and graduate versions—will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online – see URL at top of this page.

**6. FREQUENCY OF OFFERING:****Spring each year**

Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

**7. SEMESTER & YEAR OF FIRST OFFERING**

(AY2013-14 if approved by 3/1/2013; otherwise AY2014-15)

**AY2015-2016****8. COURSE FORMAT:**

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, **any core course compressed to less than six weeks must be approved by the Core Review Committee.**

**COURSE FORMAT:**  
(check all that apply)

☐

1

☐

2

☐

3

☐

4

☐

5

☒

6 weeks to full semester

**OTHER FORMAT (specify)**

**Mode of delivery (specify lecture, field trips, labs, etc)**

**Lecture****9. CONTACT HOURS PER WEEK:****3**

LECTURE  
hours/weeks

**0**

LAB  
hours /week

**0**

PRACTICUM  
hours /week

Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/guidelines-for-computing-/> for more information on number of credits.

**OTHER HOURS (specify type)**

10. **COMPLETE CATALOG DESCRIPTION** including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

Example of a complete description:

FISH F487 W, O Fisheries Management

3 Credits Offered Spring

Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. *Prerequisites: COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X; ENGL F414; FISH F425; or permission of instructor.* Cross-listed with NRM F487. (3+0)

**DVM 637 Department of Veterinary Medicine**

3 Credit Offered Spring

**Veterinary Bacteriology & Mycology**

The course will discuss bacterial structure, differences between bacterial families, fungi and their pathogenesis will be discussed. The basic principles of bacterial and fungal pathogenesis will be presented. Host response to bacterial or fungal infection, immunity, and the role of vaccines in disease prevention will be explained.

**Pre-requisites: Successful completion of first Semester Veterinary Courses**

**Biol 6XX Biology and Wildlife**

3 Credit Offered Spring

**Veterinary Bacteriology & Mycology**

The course will discuss bacterial structure, differences between bacterial families, fungi and their pathogenesis will be discussed. The basic principles of bacterial and fungal pathogenesis will be presented. Host response to bacterial or fungal infection, immunity, and the role of vaccines in disease prevention will be explained.

**Pre-requisites: Permission of instructor**

**MSL 6XX Marine Science and Limnology**

3 Credit Offered Spring

**Veterinary Bacteriology & Mycology**

The course will discuss bacterial structure, differences between bacterial families, fungi and their pathogenesis will be discussed. The basic principles of bacterial and fungal pathogenesis will be presented. Host response to bacterial or fungal infection, immunity, and the role of vaccines in disease prevention will be explained.

**Pre-requisites: Permission of Instructor**

11. **COURSE CLASSIFICATIONS:** Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities

S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? **If YES, attach form.**

YES:

NO:

x

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, **Format 6**

W = Writing Intensive, **Format 7**

X = Baccalaureate Core

11.A **Is course content related to northern, arctic or circumpolar studies? If yes, a**

**"snowflake" symbol will be**

**added in the printed Catalog, and flagged in Banner.**

YES

NO

x

12. **COURSE REPEATABILITY:**

Is this course repeatable for credit?

YES

NO

X

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit?

TIMES

If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS

13. **GRADING SYSTEM:** Specify only one. Note: Changing the grading system for a course later on constitutes a Major Course Change – Format 2 form.



LETTER: ☒ XPASS/FAIL: ☐**RESTRICTIONS ON ENROLLMENT (if any)****14. PREREQUISITES****Acceptance in Professional Veterinary Medical Program or permission of instructor**These will be *required* before the student is allowed to enroll in the course.**15. SPECIAL RESTRICTIONS, CONDITIONS****Professional Veterinary Medical program student or permission of instructor****16. PROPOSED COURSE FEES****TBD**

Has a memo been submitted through your dean to the Provost for fee approval?

**Yes/No****Yes****17. PREVIOUS HISTORY**

Has the course been offered as special topics or trial course previously?

**Yes/No****No**

If yes, give semester, year, course #, etc.:

**18. ESTIMATED IMPACT***WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.***Professional Program approved by BOR, Chancellor and Provost – Impact on Animal Resource Center in year one depending upon renovation completion.****19. LIBRARY COLLECTIONS***Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.***No****X****Yes****Department will keep complete library of required course materials in AHRB office. Additional resources are available at the UAF library as per current catalogue.****20. IMPACTS ON PROGRAMS/DEPTS***What programs/departments will be affected by this proposed action?**Include information on the Programs/Departments contacted (e.g., email, memo)***Impact on Animal Resource Center facility in year on due to renovation completion. ARC contacted and approved (jeblake@alaska.edu)****21. POSITIVE AND NEGATIVE IMPACTS***Please specify positive and negative impacts on other courses, programs and departments resulting from the proposed action.***Biology & Wildlife, Chemistry or SNRE students may request admission to course for research or professional development. Vet Med will be providing curriculum in biomedical sciences which was not available previously.****JUSTIFICATION FOR ACTION REQUESTED**

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

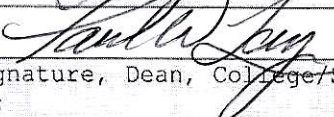
**The course is required for first year veterinary students and the syllabus is provided by CSU CVMBS. The course has been approved by their accreditation requirements and will be offered at UAF as part of the 2+2 program (first two years at UAF and last two years at CSU).**




APPROVALS: Add additional signature lines as needed.

	Date	7/7/14
Signature, Chair, Program/Department of: <u>Veterinary Medicine</u>		

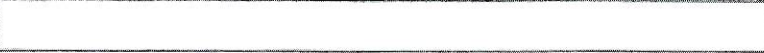
	Date	10-2-14
Signature, Chair, College/School Curriculum Council for: <u>CNSM</u>		

	Date	10/3/14
Signature, Dean, College/School of: <u>CNSM</u>		

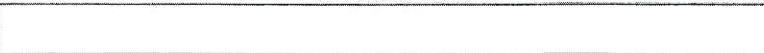

Offerings above the level of approved programs must be approved in advance by the Provost.

	Date	
Signature of Provost (if above level of approved programs)		

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair, Faculty Senate Review Committee: <u>Curriculum Review</u> <u>GAAC</u> <u>Core Review</u> <u>SADAC</u>		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
Signature, Chair, Program/Department of: 		

	Date	
Signature, Chair, College/School Curriculum Council for: 		

	Date	
Signature, Dean, College/School of: 		

ATTACH COMPLETE SYLLABUS (as part of this application). This list is online at: <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/uaf-syllabus-requirements/>  
The Faculty Senate curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may be denied.

#### SYLLABUS CHECKLIST FOR ALL UAF COURSES

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

1. Course information:

☐ Title, ☐ number, ☐ credits, ☐ prerequisites, ☐ location, ☐ meeting time  
(make sure that contact hours are in line with credits).

2. Instructor (and if applicable, Teaching Assistant) information:

☐ Name, ☐ office location, ☐ office hours, ☐ telephone, ☐ email address.

3. Course readings/materials:

☐ Course textbook title, ☐ author, ☐ edition/publisher.  
☐ Supplementary readings (indicate whether ☐ required or ☐ recommended) and  
☐ any supplies required.

4. Course description:

☐ Content of the course and how it fits into the broader curriculum;  
☐ Expected proficiencies required to undertake the course, if applicable.  
☐ Inclusion of catalog description is *strongly* recommended, and  
☐ Description in syllabus must be consistent with catalog course description.

5. ☐ Course Goals (general), and (see #6)

6. ☐ Student Learning Outcomes (more specific)

7. Instructional methods:

☐ Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

8. Course calendar:

☐ A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

9. Course policies:

☐ Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

10. Evaluation:

☐ Specify how students will be evaluated, ☐ what factors will be included, ☐ their relative value, and ☐ how they will be tabulated into grades (on a curve, absolute scores, etc.) ☐ Publicize UAF regulations with regard to the grades of "C" and below as applicable to this course. (Not required in the syllabus, but is a convenient way to publicize this.) Link to PDF summary of grading policy for "C":

[http://www.uaf.edu/files/uafgov/Info-to-Publicize-C\\_Grading-Policy-UPDATED-May-2013.pdf](http://www.uaf.edu/files/uafgov/Info-to-Publicize-C_Grading-Policy-UPDATED-May-2013.pdf)

11. Support Services:

☐ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

12. Disabilities Services: Note that the phone# and location have been updated.

<http://www.uaf.edu/disability/> The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures that UAF students have equal access to the campus and course materials.

☐ State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655) to provide reasonable accommodation to students with disabilities.

5/21/2013



# **DVM 637 Veterinary Bacteriology and Mycology**

## **SYLLABUS – SPRING**

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**Department of Veterinary Medicine, University of Alaska Fairbanks**

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### **1. Course Information:**

Title: **Veterinary Bacteriology and Mycology**  
Number: DVM 637, BIOL 6XX, MSL 6XX  
Credit: 3  
Prerequisites: Successful completion of first semester of veterinary courses (DVM637) permission of instructor (Biol 6XX, MSL 6XX)  
Location: TBD  
Meeting time: Three times a week for one hour lectures exact time TBD

### **2. Instructor Contact Information:**

Name: Dr. Karsten Hueffer  
Office Location: Arctic Health Research Building 2W02  
Office Hours: By appointment  
Office Phone: 907-474-6313  
Email: [khueffer@alaska.edu](mailto:khueffer@alaska.edu)

Email is the best way to reach the instructor. You should receive a response to your email within 24 hours when it is received. If you do not receive a reply within this time frame, assume that the email was not received and please resend your message.

### **3. Course Reading/Materials:**

Textbook Title: Veterinary Microbiology and Microbial Disease  
Editors: P. J. Quinn, B. K. Markey, F. C. Leonard, P. Hartigan, S. Fanning, E. S. FitzPatrick  
Edition: 2<sup>th</sup> Edition  
Publisher: Wiley Blackwell Scientific Ltd.  
ISBN: 978-1-4051-5823-7

### **4. Course Description:**

The course will discuss bacterial structure, differences between bacterial families, fungi and their pathogenesis will be discussed. The basic principles of bacterial and fungal pathogenesis will be presented. Host response to bacterial or fungal infection, immunity, and the role of vaccines in disease prevention will be explained.

### **5. Course Goals:**

To present the basics of veterinary bacteriology & mycology and the characteristics of each family of bacteria or fungi; how different microbes interact with their respective hosts at molecular, cellular, organismal and population levels in causing disease; clinical diseases and pathologic lesions associated with major microbial diseases with emphasis on practical considerations related to accurate diagnosis, prevention and management of those diseases.

## 6. Student Learning Outcomes:

Students will be able to:

1. name the most likely agents causing infection in various body sites and indicate the relative importance of bacterial and fungal disease agents in veterinary medicine. Emphasis will be on the diseases of common domestic species of animals, as well as selected foreign animal diseases, zoonoses, and public health issue.
2. prepare laboratory requests and documentation in medical records using common and scientific names of the more significant disease agents (bacteria and fungi) and the associated diseases.
3. list most likely pathogens causing various diseases by applying knowledge of virulence factors and pathogenesis of infectious diseases.
4. recognize the unique identifying characteristics of bacterial and fungal agents observed in clinical materials and name the associated agent(s).
5. identify the reservoirs, mode of transmission, host- and tissue-specificity by applying knowledge of the biological complexities of microbial ecology and host-pathogen relationships.
6. devise strategies for prevention, control, and vaccination based on microbial ecology and host-pathogen relationships to prevent microbial disease.
7. select appropriate (selection-of-choice) antimicrobial agents for treating specific infections through the knowledge acquired regarding mechanisms of action and spectrum of activity of the major classes of antibacterial and antifungal drugs, and predicted susceptibilities of specific agents.

## 7. Instructional Methods:

### Lectures

The lectures will emphasize selected aspects of microbiology (biology of agents) that are applicable to the practice of veterinary medicine. Lectures are intended to provide illustration, clarification, and updating of information. My philosophy of lecturing is that it is a coaching session to help you understand which information is most important and how to use it. But, the lecture is NOT meant to be the transfer of the exact body of knowledge that is useful in the practice of veterinary medicine. There is far more to learn than I can recite in our limited time together.

### Textbooks

There are many reference books that you may find helpful as a supplement to the lectures. A wide variety of general, allied health, and health professions microbiology



textbooks are available in the library. Various veterinary medical textbooks have large sections devoted to infectious diseases. Within these discussions of disease, the ecology, pathogenic mechanisms and other characteristics of the agents are frequently reviewed.

**8. Course Calendar:**

For details, refer to the section "Tentative Lecture Schedule" in the end of this syllabus.

**9. Course Policies:**

**Attendance:**

Students are expected to attend all classes. Exams will draw on lecture material and students that do not attend class will likely not do well in exams.

**Classroom Behavior:**

Any type of behavior in the classroom that is disruptive, distracting, or disrespectful to the instructor or to your fellow students will not be tolerated and will result in dismissal from the classroom. This includes, but is not limited to, disrespectful comments, and the use of tobacco products. All cell phones or other such devices must be silenced while in the classroom. Do not browse the Internet, text message or IM while in the classroom. You can use such devices for note taking or other class related activities.

**Plagiarism:**

Plagiarism is the overt or covert use of other people's work or ideas without acknowledgement of the source. This includes using ideas or data from a classmate or colleague without permission and acknowledgement, including sentences from journal articles in your writing without citing the author, or copying parts of a website into your essay. Plagiarism and cheating are serious offenses that violate the student code of conduct which may result in an "F" in the course and/or referral to the university.

**10. Evaluation:**

**Examinations, Assignments, and Grading:**

Student performance will be evaluated by examinations and homework assignments. The total available points in the course is planned to be approximately 350 points, distributed in two hourly examinations (each worth 75 points), a final exam (75 points new material and 55 points comprehensive), and 14 homework assignments (each worth 5 points). The examinations will contain a variety of question styles, including multiple choice, short answer, and discussion questions. Names of microbes must be spelled correctly and rules of nomenclature observed (underline, capitalize genus, and use genus name with species) for full credit.

The homework assignments are on the web where DVM 637 should already be listed as one of your courses on-line homepage. Homework consists of small quizzes, crossword puzzles with microbial terminology and other activities to reinforce the material discussed that week. Each assignment has a deadline for completion (generally at the end of each week), must be submitted on line. These assignments may be discussed and worked on in small groups, but each individual must logon and submit answers to receive credit.

Examinations and course assignments must be completed as scheduled. Re-scheduling will be allowed only for serious, unavoidable circumstances (not for



voluntary choices). Absence from an examination or assignment must be excused in advance by the course coordinator or Department Office and requires completing the excused absence form. If an examination or assignment is not completed as scheduled and the absence is not excused, zero (0) points will be assigned.

**Grades for the course will be assigned as follows:**

A+	96-100	%
A	92-95.9	%
A-	88-91.9	%
B+	84-87.9	%
B	80-83.9	%
B-	76-79.9	%
C+	72-75.9	%
C	68-71.9	%
C-	64-67.9	%
D	60-63.9	%
F	<60	%

**11. Support Services:**

If you require more assistance than can be provided in class, and office hours, you may want to contact Student Support Services (<http://www.uaf.edu/sssp/>) or the Department of Veterinary Medicine for assistance.

**12. Disability Services:**

All students, including those with disabilities, are welcome in this course, and we are committed to providing equal access to this course for all students. If you have a disability (including learning disabilities) please inform us during the first week of class so that we can accommodate your specific needs. If you have not already done so, you will also need to contact UAF's Office of Disabilities Services (474- 5655). Everyone should have the opportunity to participate fully in the course and to complete assignments and exams to the best of their ability. If accommodations are needed to enable you to do so, we will gladly work with you to provide them.

## Tentative Lecture Schedule

<u>Week</u>	<u>Topic (approximate schedule)</u>
<b>Week 1</b> 1/14-1/20	Introduction: Bacterial Structure & Pathogenesis of bacterial infections
<b>Week 2</b> 1/21-1/27	Microbiota & biotics Genetics, Antimicrobial Resistance Antimicrobials
<b>Week 3</b> 1/28-2/3	<i>Streptococcus</i> , <i>Staphylococcus</i> <i>Rhodococcus</i>
<b>Week 4</b> 2/4-2/10	<i>Corynebacterium</i> , <i>Trueperella</i> <i>Listeria</i> , <i>Erysipelothrix</i> , <i>Actinomycetes</i>
<b>Week 5</b> 2/11-2/17	<i>Bacillus</i> <i>Clostridium</i>
<b>Week 6</b> 2/18-2/24	Non-spore forming anaerobes <b>Exam 1</b> Enterobacteriaceae, <i>E. coli</i>
<b>Week 7</b> 2/25-3/2	<i>E. coli</i> , <i>Klebsiella</i> , <i>Proteus</i> <i>Salmonella</i> , Endotoxin, Sepsis <i>Yersinia</i>
<b>Week 8</b> 3/3-3/11	<i>Pseudomonas</i> , <i>Burkholderia</i> , <i>Aeromonas</i> , <i>Bordetella</i> <i>Mannheimia</i> , <i>Pasteurella</i> ,
<b>Week 9</b> 3/21-3/25	<i>Actinobacillus</i> , <i>Histophilus</i> <i>Brucella</i> <i>Brucella</i> cont., <i>Taylorella</i>
<b>Week 10</b> 3/28-4/1	<i>Campylobacter</i> , <i>Helicobacter</i> <i>Leptospira</i> <i>Brachyspira</i> , <i>Borrelia</i>
<b>Week 11</b> 4/4-4/8	<i>Francisella</i> , <i>Moraxella</i> <b>Exam 2</b> <i>Bartonella</i> , misc. bacteria
<b>Week 12</b> 4/11-4/15	<i>Mycobacterium</i> <i>Mycoplasma</i> ( <i>Haemobartonella</i> , <i>Eperythrozoon</i> ) <i>Rickettsia</i> , <i>Anaplasma</i>



**Week 13 4/18-4/22**

*Ehrlichia*, *Coxiella*  
*Chlamydia* and *Chlamydophila*  
Fungal Structure & Function, Yeast  
Dermatophytes  
Dimorphic Fungi

**Week 14 4/25-4/29**

Miscellaneous Fungi: *Aspergillus*, *Pneumocystis*,  
Mycotoxin production  
Antifungal drugs, *Protheca*, *Pythium*, *Rhinosporidium*  
Disinfectants, Course conclusion

**Examination 3 / Comprehensive exam as  
scheduled by University**