University of Hawaii Community Colleges
Proposal to Initiate, Modify or Delete a Course

1. Type of Action
   - A. Addition
   - B. Deletion
   - C. Modification: in credits, in title, in prerequisites or co-requisites, in number or alpha, Other (click to specify)

2. New Alpha, Number and Title
   Math 101 Mathematics for Veterinary Assistants

3. Credits 1 credit

4. Old Alpha, Number and Title

5. Credits *

6. New Catalog Description
   This course is designed for students that enroll in the Veterinary Assistant Certificate program. Topics include the application of mathematical skills to solve applied problems for veterinary assistants with emphasis on dosage, concentration, dilution and drip rates. Also included is mathematical and laboratory terminology.

7. Select box and type specific information in text box.
   - Prerequisites
   - Corequisites or Recommended Preparation
   - Grade of "C" or better in MATH 25 or equivalent, satisfactory math placement test score, or consent of instructor

8. Student Contact Hours Per Week
   - Lecture 1
   - Lecture/Lab
   - Lab
   - Other (click to specify)

9. Proposed Date of First Offering
   Semester Fall
   Year 2009

10. This course ☑ is proposed for the * Program. ☑ can fulfill * If Other, specify Veterinary Technician ASC

11. This course Makes No Difference in the number of credits required for the program/core.

12. Equivalent or similar courses offered in the UH System:

<table>
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<tr>
<th>Campus</th>
<th>Alpha, Number, Title</th>
<th>Campus</th>
<th>Alpha, Number, Title</th>
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<tbody>
<tr>
<td>*</td>
<td>none in UH as there is no program for Veterinary Technicians in Hawaii</td>
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13. This course is (check one and click in appropriate textbox and provide details):
   - ☑ Already articulated with
     Provide details of existing or desired articulation (date, college(s), purposes, pre-major, etc.) in this space:

   - ☑ Appropriate for Articulation with
     Provide details of existing or desired articulation (date, colleges(s), purposes, pre-major or major, etc.) in this space:

   - ☑ Not yet appropriate for Articulation.

14. Reason for Initiating, Modifying or Deleting Courses or Other Pertinent Comment:
   Hawaii is one of six states that does not require Veterinary Assistant/Technician Certification. Industry members came to the college and requested that WCC help build a veterinarian assistant/technician certification for the state. In 2011, all veterinary technicians must attend a 2-year accredited program. This course will ensure that students have the needed mathematical application skills to work in the veterinarian office and to satisfy the 2011 certification.

Requested by: [Signature] [Date] 1/22/09
Department Chairperson

Approved by: [Signature] [Date] 1/22/09
Curriculum Committee Chairperson

[Signature] [Date] 2/10/09
Dean of Senate Chairperson

[Signature] [Date] 2/11/09
Dean of Instruction

CCCM #6100 (Amended for WCC use October 2002)
## Levels of Review of Course Proposal at Windward Community College

### Course Alpha, Number, and Title:

<table>
<thead>
<tr>
<th>Signatures</th>
<th>Dates</th>
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1. **Department Area (more than one departmental instructor's signature required)**

   - [Name 1]
   - [Name 2]
   - [Name 3]

   | 1/22/09 |

2. **Department Chairperson**

   - [Name]

   | 1/22/09 |

   **Was this course discussed in a department meeting?**

   - [Yes]
   - [No]

3. **Division**

   - [Name]

   | 1/22/09 |

4. **Curriculum Committee Review**

   - [Approved]
   - [Disapproved]

   **Reason:**

   - [Signature]

   **Curriculum Committee Chairperson**

   | 01/07/09 |

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CCC M #6100 (Amended for WCC use October 2002)
1. How is this course related to the education needs and goals of the College/Department/Community as reflected in the EDP/ADP?

This course supports the 2002-2010 Strategic Plan (p4) which is 1) to specialize in the effective teaching of remedial/developmental education, general education, and other introductory liberal arts, pre-professional, and selected baccalaureate courses and programs; 2) to provide the trained workforce needed by the State, by offering occupational, technical, and professional courses and programs which both prepare students for immediate employment and career advancement 3) To provide opportunities for personal enrichment, occupational upgrading, and career mobility through credit and non-credit courses and activities.

It supports the AA Degree Learning Outcomes which are: 1) to use critical thinking and problem-solving skills to evaluate and synthesize information to form conclusions, ideas, and opinions; 2) to enter and perform effectively in the work force; and 3) to develop skills that improve personal well-being and enhance professional potential.

2. Provide details of any additional staff, equipment, facilities, library/media material, faculty preparation and other financial support that would be required to implement this course. (Include an estimate of the actual cost of supplies and equipment.) What has been done to provide for these additional costs for the proposed date of offering? Who will teach the course?

A faculty member will be asked to teach the math course and additional funding will be needed to pay a lecturer who teaches the faculty’s load.

3. Is a similar course taught elsewhere in the UH system? No If yes, provide details of how this course differs from existing similar courses.

It is not taught in Hawaii as there is NO veterinary program in the state. The course is taught in other areas - Tacoma, Wa. Community College has Math 124 and 125, Pierce Community College has Medical Dosaging, Colby College has Math 108 Math for Health Professionals and Veterinary Technicians (2).

4. Is this course experimental and/or unique to Windward Community College? Yes If yes, provide rationale and details of its impact on the College Curriculum

Industry members came to the college and requested that WCC help build a veterinarian assistant/technician certification for the state. In 2011, all veterinary technicians must attend a 2-year accredited program. This course will ensure that students have the needed mathematical application skills to work in the veterinarian office and to satisfy the 2011 certification.

There should be no impact on the College Curriculum.

5. Is a similar course taught in the upper division level by a 4-year UH college? No If yes, explain why this course is appropriate at the lower division or how it differs from its upper division counterpart.

6. Please attach a complete course outline. Your course outline should address all the items listed in the Guidelines for Course Outlines.

7. If this course is numbered 100 or above or appropriate for transfer to a 4-year college, complete and attach WCC Form for Transfer Courses (blue). See criteria for transfer courses.
Math 101 Mathematics for Veterinary Assistants (1 credit)

INSTRUCTOR: TBA
OFFICE: TBA
OFFICE HOURS: TBA
TELEPHONE: TBA
EFFECTIVE DATE: Fall 2009

Windward Community College Mission Statement
Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.

Catalog Description
This course is designed for students that enroll in the Veterinary Assistant Certificate program. Topics include the application of mathematical skills to solve applied problems for veterinary assistants with emphasis on dosage, concentration, dilution and drip rates. Also included is mathematical and laboratory terminology.

Student Learning Outcomes
The student learning outcomes for the course are:
1. Define terminology and abbreviations used in measurements and convert from one measurement to another with accuracy on the fly
2. Understand oral and written requests to calculate dosages accurately and quickly
3. Use mathematical formulas to calculate stock solutions to a desired concentration with accuracy
4. Demonstrate proficiency in calculating infusion rates for fluid replacement therapy and for surgery
5. Identify parts of a basic graph to understand medical charts
6. Identify basic statistical terms to make informed decisions from numerical data and information
7. Demonstrate proficiency in performing operations with fractions, decimals, percentages, ratios and proportions without the use of a calculator

Assessment Tasks and Grading
There will be weekly tests, a midterm and a final exam. To receive a passing grade for this course, students must pass each weekly test at an established pass rate or higher.

GRADING: The letter grade for the semester will be assigned as follows:
A 90% - 100% of total points possible
B 80% - 89%
C 70% - 79%
D 60% - 69%
F Below 60%

Prerequisites
Grade of “C” or better in MATH 25 or equivalent, satisfactory math placement test score, or consent of instructor.

**Learning Resources and Materials**


**Additional Information**

**Disabilities**
If you have a physical, sensory, health, cognitive or mental health disability that could limit your ability to fully participate in this class; you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ‘Akoakoa 213 for more information.

**Electronic Devices in Class Policy**
Cellular phones, pagers, CD players, radios, and similar devices are to be turned off and not used in the classroom.

**Mathematics for Veterinary Assistants Syllabus**

<table>
<thead>
<tr>
<th>Day /Time CRN</th>
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<tbody>
<tr>
<td><strong>COURSE CONTENT AND APPROXIMATE TIME TO BE SPENT ON EACH TOPIC</strong></td>
</tr>
<tr>
<td>Unit 1: Review of mathematical skills with emphasis on applications and terminology for veterinary assistants (2.5 weeks)</td>
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<tr>
<td>Unit 2: Measurements used in Veterinary Medicine (2.5 weeks)</td>
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<tr>
<td>Unit 3: Drug Orders and Medicine Labels (2.5 weeks)</td>
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<tr>
<td>Unit 4: Dose Calculation and Syringe Measurement (2.5 weeks)</td>
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<tr>
<td>Unit 5: Calculating Intravenous Infusions (2.5 weeks)</td>
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<tr>
<td>Unit 6: Other Calculation Methods (2.5 weeks)</td>
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