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

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

2. New Alpha, Number and Title
   - ZOOL 254 Exercise Therapy

3. Credits *
   - 3

4. Old Alpha, Number and Title

5. Credits *

6. New Catalog Description
   The course introduces selected concepts, principles and practices of physical activity that affect human wellness and fitness throughout all stages of life. In particular, the concepts of exercise specificity, adaptation, and remediation are presented as they affect human growth and development, and the aging process. The clinical concept of hypokinetic disease (under activity) is presented and its counterpart, clinical exercise therapy (Rx dosage) for purposes of preventative health application and remediation. Comparative study of both Western and Eastern exercise regimens are included in the context of their clinical contribution to wellness.

7. Select box and type specific information in text box.
   - Prerequisites [ ] Corequisites or [ ] Recommended Preparation
     BIOL 100 or ZOOL 101 or ZOOL 141 & 142

8. Student Contact Hours Per Week
   - Lecture 3
   - Lab
   - Other (click to specify)

9. Proposed Date of First Offering
   - Semester Spring
   - Year 2008

10. This course [ ] is proposed for the Liberal Arts Program Program. [ ] can fulfill Nat Sci: Biological If Other, specify

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>
<thead>
<tr>
<th>Campus</th>
<th>Alpha, Number, Title</th>
<th>Campus</th>
<th>Alpha, Number, Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>KapiolaniCC</td>
<td>ESS 254 Exercise Therapy</td>
<td>*</td>
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<tr>
<td>UH Manoa</td>
<td>KLS 354 Exercise Sports Physiology</td>
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</tbody>
</table>

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:
   To offer pre-nursing students as well as interested community members the opportunity to learn about the therapeutic uses of exercise.

Requested by: [Signature]
Approved by: [Signature]

Department Chairperson
CCHP Committee Chairperson
Faculty Senate Chairperson
Dean of Instruction

2/22/07
April 10, 2007
10/16/07
10/17/07
10/18/07

CCCC #6100 (Amended for WCC use October 2002)
University of Hawaii Community Colleges
Proposal to Initiate, Modify or Delete a Course

Levels of Review of Course Proposal at Windward Community College

Course Alpha, Number, and Title: Exercise Therapy: An Introduction to the Role of Exercise and Physical Activity in Wellness and Fitness

Signatures

1. Department Area (more than one departmental instructor’s signature required)

   [Signatures]

   [Dates]

   1. Department Chairperson

   2. Department Chairperson

   Was this course discussed in a department meeting? □ Yes □ No

   [Dates]

   3. Division

   [Signature]

   [Dates]

   4. Curriculum Committee Review

   Approved ☑

   Disapproved ☐

   Reason:

   [Signature]

   [Dates]

   Curriculum Committee Chairperson

   April 10, 2007

CCCM #6100 (Amended for WCC use October 2002)
University of Hawaii Community Colleges
Proposal to Initiate, Modify or Delete a Course
New Course Proposal Form – Go to next page for Course Modification)

WCC Form for New Course Proposals
(This sheet was originally pink.)

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 contributes to fulfilling the mission of Windward Community College by helping students to "develop skills, fulfill their potential, and enrich their lives." The course addresses the fundamental aspects of a physical active lifestyle on lifelong health and wellness.

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?

   Other than the costs associated with having a lecturer teach this class, there are no anticipated costs related to the course. E. M. Bernauer, Ph.D., Professor Emeritus will teach it.

3. Is a similar course taught elsewhere in the UH system? Yes! If yes, provide details of how this course differs from existing similar courses.

   KapCC: ESS 254
   UHM: KLS 354
   The emphasis of this course focuses on presenting and developing concepts in underlying principles and not on its practical application (e.g., exercise routines). ZOOL 254 will emphasize the historical and scientific basis of physical activity as it affects an individual's health and wellness.

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

   Yes, it is unique to WCC. The current course encorporates relevant documented research findings over the past 10 years and it emphasizes the underlying concepts and facts and not their application, per se.

5. Is a similar course taught in the upper division level by a 4-year UH college? Yes If yes, explain why this course is appropriate at the lower division or how it differs from its upper division counterpart.

   UHM: KLS 354
   KLS 354 targets students majoring in kinesiology.

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.
WCC Form for Transfer Courses
(To be completed for articulation with any 4-year UH campus)
(This sheet was originally blue.)

Course Alpha and Number ZOOL 254

Submitted by E. M. Bernauer, Ph.D.

Date February 21, 2007

1. List the counterpart to this course on any 4-year UH campus. Describe the relationship between the course any related baccalaureate program area.

None

2. Is this course taught or accepted by major accredited colleges or universities? Give one or two examples.

University of Illinois, Urbana; University of Wisconsin, Madison; University of California, Davis.

3. Please attach a complete course outline if you have not done so already. Your course outline should address all the items listed in the Guidelines for Course Outlines.
University of Hawaii Community Colleges
Proposal to Initiate, Modify or Delete a Course
Articulation with 4-year UH Campus Form

COURSE ARTICULATION FORM (GENERAL EDUCATION CORE)

ORIGINATING CAMPUS: Windward Community College DATE SUBMITTED: February 21, 2007

COURSE ALPHA & NUMBER: ZOOL 254 SEMESTER CREDITS: 3

COURSE TITLE: Exercise Therapy

DATE OF OUTLINE: February 21, 2007 Year 2007

(** Representative outline, no multiple syllabi, please.)

1. Articulation committee to review this course:

   Standing Committees
   Written Communication 
   Mathematical & Logical Thinking 
   World Civilizations 
   Languages 
   Arts & Humanities 
   Natural Science X 
   Social Science 

2. The information in this item is required by the reviewing committee so that it has a starting point for reviewing the course. It is the responsibility of the submitting campus to do the necessary research to provide this information.

In the opinion of the originating campus, this course is equivalent to the following and/or meets the criteria for the indicated core categories. Every core category space, except your own campus, must be filled in (can include ‘none’). An equivalent course, if known, may be helpful to committee members but is not required.

<table>
<thead>
<tr>
<th>Receiving Campus</th>
<th>Equivalent Course (Alpha and Number)</th>
<th>Core Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>UH Hilo</td>
<td></td>
<td>Natural Science (Biology)</td>
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<tr>
<td>UH Manoa</td>
<td></td>
<td>DB</td>
</tr>
<tr>
<td>UH West Oahu</td>
<td></td>
<td>Natural Science (Biology)</td>
</tr>
<tr>
<td>Hawaii CC</td>
<td></td>
<td>Natural Science Group 1</td>
</tr>
<tr>
<td>Honolulu CC</td>
<td></td>
<td>DB</td>
</tr>
<tr>
<td>Kapiolani CC</td>
<td>ESS 254</td>
<td>DB</td>
</tr>
<tr>
<td>Kauai CC</td>
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<td>Natural Science Group 1</td>
</tr>
<tr>
<td>Leeward CC</td>
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<td>DB</td>
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<tr>
<td>Maui CC</td>
<td></td>
<td>Natural Science</td>
</tr>
<tr>
<td>Windward CC</td>
<td></td>
<td>DB</td>
</tr>
</tbody>
</table>

3. If submitted electronically, I understand that this outline will be posted to a publicly accessible web site to enable open access for reviewing committees and campuses. The outline will be taken off the site upon completion of the review.

Typed Name or Signature

Note: If possible submit coversheet and course outline electronically as e-mail attachments (preferably in ‘pdf’ format). If submitting in printed form, 20 copies of coversheet and course outline are required for distribution for appropriate review.

Note: UCA Clearinghouse
John Muth, Office of the Chancellor for Community Colleges, is acting as staff to the University Council on Articulation and is responsible for tracking all courses submitted for articulation.

Revised 1/29/2001
Exercise Therapy: An Introduction to the Role of Exercise and Physical Activity in Wellness and Fitness

03 Credits

INSTRUCTOR:
OFFICE:
OFFICE HOURS:
TELEPHONE:
EFFECTIVE DATE: Fall 2007

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

An introduction to the concept of exercise specificity and the associated physical and biological dimensions. These dimensions serve as a basis to categorize all physical activity for purposes of clinical assessment, preventative management, and/or remediation of functional wellness and fitness. The capacities and capabilities of the biological organism to engage in most physical tasks is examined with respect to age, gender, wellness and fitness. Special attention will be given to the use of physical activity for preventative management and/or remedial purposes, a Rx guideline in the use of exercise. Comparison of Western and Eastern exercise regimens will be made as relevant to wellness and fitness.

Activities Required at Scheduled Times Other Than Class Times

None

STUDENT LEARNING OUTCOMES

By the end of this course the student will be able to

1. define basic terms, concepts and principles of exercise, fitness and wellness
2. describe the fundamental classification of exercise biology and its underlying processes
3. discuss the relationships between exercise and human health
4. explain the specificity of exercise and its multiple modes of application and related responses
5. describe guidelines for assessing and planning a fitness-wellness program
6. comprehend the professional literature and correctly interpret and categorize new developments/approaches in the field
7. apply scientific logic to the selection and application of the many commercial products and procedures inundating the field
8. contrast Western and Eastern approaches to wellness
COURSE CONTENT

Concepts or Topics

• Basic physical dimensions of all human function physical activity and its health benefits
• The historical evolution of the underlying factors that describe health, wellness, fitness and motor ability: general wellness/organic soundness; general motor ability and development; general motor fitness; physical fitness/reserve capacities
• Exercise therapy: an introduction of its concepts and practices
• Assessment methods and procedures to measure physical fitness and wellness
• Review of published population norms and their utilization in wellness & fitness analysis
• Exercise and the cardiovascular system
• Exercise and the pulmonary system
• Muscle skeletal system, structure and function
• Bones and joints, structure and function
• Muscle joints assessment of range of motion
• Soft tissue – connective tissue
• Neuromuscular system and motor development and function
• Body weight
• Exercise prescription: ACSM Guidelines; Pre-participation screening; Fitte principles
• Exercise Prescription for healthy and select diseases
• Exercise prescription for children and adolescents, middle years, elderly
• Exercise in the treatment of cardiovascular disorders
• Exercise as a countermeasure to stress
• Treatment for pulmonary dysfunctions: exercise types for treatment of respiratory disease
• Exercise treatment of muscle skeletal disorders
• Exercise treatment of neuron-muscular dysfunction
• Obesity and metabolic diseases
• Exercise adherence and compliance: patient factors; program factors; exercise prescription guidelines
• Overview of established modalities of therapy: aquatic; walking/running; stretching; swimming; thermal; bicycling
• Relaxation - stress reduction – aging
• Mind body fitness: Yoga; Qi Gong; Tai Chi; Pilates
• Special physiology states

COURSE TASKS ASSESSMENT AND GRADING

1. Term Paper
   Elective topic on a muscle joint injury and the diagnosis and rehabilitation; topic to be approved by instructor.
   75 points

2. Report on visit to Practitioner
   A structured format will be provided each student
   25 points
prior to the visit.

3. Midterm I
4. Midterm II
5. Final Exam Comprehensive

All tests will be of an objective nature.

EVALUATION:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% - 100% of cumulative points possible (360-400 points)</td>
<td>75 points</td>
</tr>
<tr>
<td>B</td>
<td>80% - 89% of cumulative points possible (320-359 points)</td>
<td>75 points</td>
</tr>
<tr>
<td>C</td>
<td>70% - 79% of cumulative points possible (280-319 points)</td>
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<tr>
<td>D</td>
<td>60% - 69% of cumulative points possible (240-279 points)</td>
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<tr>
<td>F</td>
<td>Below 60% of cumulative points possible (239 &lt; points)</td>
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</tbody>
</table>

I Incomplete. This temporary grade given at the instructor’s option when a student has failed to complete a small part of a course because of circumstances beyond the student’s control. All required work must be completed by the last day of instruction of the succeeding semester.

CR The CR/NC option must be declared by the end of the 10th week of classes. Written consent of instructor is required for this option. Achievement of objectives at the C level or higher. Achievement of objectives at less than C level. (Formal grade)

NC See CR above.

N Achievement of objectives at less than C level. (Optional instructor’s grade)

W Official withdrawal after the third week of a 16-week course and prior to the end of the 10th week. If a student officially withdraws by the end of the 3rd week of a 16-week course, the record of registration in this course will not appear on the student’s transcript.

Other Information:

1. All tests must be taken within a supervised setting over the dates listed in the syllabus. Excused absences – medical – will be allowed and the test completed ASAP in the Learning Center.

2. The field trip visits will be scheduled and student groups assigned. No make-ups. A typed single page report is required one week post visit. Answer the posted questions.

3. A term report on a single modality of therapeutic exercise is required. Deductions of grade will be made for late submission or incomplete format.

4. Exam dates and due dates are subject to change. All changes will be announced.

5. A student can determine his/her current grade at any time during the semester by dividing his/her cumulative score by the cumulative points possible (290), and converting into a percentage and referring to the table of Letter Grades.
6. Any student wishing to be informed of his/her Final Exam grade and/or semester grade in advance of the official report of grades should email a request for the grades to the instructor immediately after the Final Exam. The student may also provide the instructor a stamped, self-addressed postcard or envelope on the day of the Final Exam with an enclosed note requesting the grades.

**LEARNING RESOURCES**

**PRIMARY TEXT RESOURCES**


**GENERAL REFERENCES AND RESOURCE INFORMATION**

These texts may be used for selected readings and as additional reference materials.

8. The Alexander Technique by Richard Brennan, Barnes and Noble, 1991
12. Selected references of Eastern Exercise Regimens: Tai Chi, Qi Gong, Yoga.
# Terms and Concepts

<table>
<thead>
<tr>
<th>Homeostasis</th>
<th>Control</th>
<th>Regulation</th>
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</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>Overload</td>
<td>Training/Threshold</td>
</tr>
<tr>
<td>Frequency</td>
<td>Repetition</td>
<td>Intensity</td>
</tr>
<tr>
<td>Time/Duration</td>
<td>Types of Exercise</td>
<td>Enjoyment</td>
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<tr>
<td>Fatigue</td>
<td>Impairment</td>
<td>Adaptation</td>
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<tr>
<td>Wellness (health/fitness)</td>
<td>Functional Capacity</td>
<td>Fitness/Vitality</td>
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<tr>
<td>Aging</td>
<td>Biological Age</td>
<td>Average Age</td>
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<tr>
<td>Energy Metabolism</td>
<td>Aerobic/Aerobic</td>
<td>Basal Metabolism</td>
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<tr>
<td>Exercise Training</td>
<td>Cross Training</td>
<td>Over Training</td>
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<tr>
<td>Free Energy</td>
<td>Kinetic Energy</td>
<td>Potential Energy</td>
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<tr>
<td>Hypertrophy</td>
<td>Hyperplasia</td>
<td>Hyper-function</td>
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<tr>
<td>Hypertension</td>
<td>Stress response</td>
<td>Psychosomatic</td>
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<td>Perceived Exertion</td>
<td>Hypokinesis</td>
<td>Hyperkinesis</td>
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<td>Somatotype</td>
<td>Body Composition</td>
<td>Normal Weight</td>
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<tr>
<td>Negative Feed Back</td>
<td>Up Regulation</td>
<td>Down Regulation</td>
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<tr>
<td>Warm-up Exercise</td>
<td>Thermal/Vascular</td>
<td>Stretching/Ventilation</td>
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<td>Neuro-muscle readiness</td>
<td>Exercise Types</td>
<td>Exercise Modalities</td>
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<tr>
<td>Ambulatory</td>
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<td>Isokinetic</td>
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<td>Concentric</td>
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<td>Rowing</td>
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<td>Climbing</td>
<td>Ballistic</td>
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<tr>
<td>Gymnastic</td>
<td>Impact/Low Impact</td>
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<tr>
<td>Callisthenic</td>
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<td>Eastern Cultural Exercise Arts</td>
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<td>Taofist</td>
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<td>- Heike</td>
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