I. **COURSE TITLE:** PED 105 **Water Aerobics** 1 hour PED credit

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II. **PREREQUISITES:** Does NOT require swimming ability. Water shoes required for comfort, traction, and safety.

III. **COURSE DESCRIPTION:** This course is outlined to teach the benefits of exercising while in shallow water. It will increase one's knowledge, provide experience, and improve one's flexibility and muscle tone. With breathing rate in the proper range on the RPE scale, it will increase strength and endurance levels for land sports while encouraging weight management. The four (4) components of performance skills successfully taught in this course are agility, speed, balance, and coordination.

IV. **RATIONALE:** This course is compatible with the mission of Mississippi College, a Christian College, because of the value placed on stimulating physical development. Water aerobics is a safe way to exercise (decreasing the risk of injury), and it is an exercise which can be performed throughout life. There is a demand for water aerobics, especially since physicians encourage this type of exercise. Exercises combine stretching, abdominal work, targeting specific muscle pairs, running, and walking to aid in the following benefits listed in the AKWA and the AEA Aquatic Fitness Research Journal:

A. Exercising in shallow water is less stressful than land exercises to ankles, knees, hips, and the back due to the buoyancy of the water which reduces impact. In this respect, shallow water exercise is a non-weight bearing exercise.
B. The currents of the moving water create extra resistance and require more energy to move especially for the lower extremities. In this respect, water aerobics becomes a light weight bearing exercise which can be intensified as equipment is added.
C. Using water properties of buoyancy and resistance, two separate benefits occur:
   1. For submerged body parts, flexibility and range of motion are increased by the buoyancy of the shallow water.
   2. During exercises submerged muscle pairs are developed more evenly due to the surrounding moving water swirling around the body. Therefore, injuries are less likely to occur during land performance.
D. Moves: neutrality, rebounding, suspension, and quarter turns used interchangeably increase the workout intensity by using multi-directional resistance. The churning water creates a more
` difficult workout environment; thus with continued usage, promotes muscle strengthening and increases the endurance level for land sports.
E. Pushing muscles through the swirling water increases the action of the fast twitch fibers which can grow two (2) times as large with proper training.
F. Knowing how to swim is NOT essential so it's easier for most to participate, even for many who are physically challenged.

V. **LEARNING OBJECTIVES AND OUTCOMES:** Upon course completion a student will:

A. Have discovered a lifetime exercise to remain healthier by improving body functions through physical fitness in shallow water.
B. Have improved endurance, flexibility, thus increased performance skills during land activities.
C. Have gained knowledge of the benefits of water fitness.
D. Have had an opportunity to develop interpersonal relationships while providing fun and enjoyment during this course.

VI. ACADEMIC INTEGRITY: It is expected that a student attending Mississippi College will be scrupulously honest. Therefore, plagiarism and cheating will be dealt with in accordance with the policies of the university. These policies are stated in the current Undergraduate Bulletin, Policy 2.19.

VII. COURSE TOPICS: The major topics to be considered are:

A. Shallow water aerobic benefits
B. Differences between water fitness and swimming
C. Aquatic temperatures
D. Aquatic chemicals

VIII. INSTRUCTIONAL METHODS: Instructional procedures will include:

A. Explanation of shallow water benefits, aquatic temperatures, and chemicals.
B. Demonstration of proper body alignment and movement for water fitness exercises and stretches.
C. Demonstration and explanation for use of the following types of equipment:
   1. Cuffs
   2. Bells
   3. Buoyancy belt
   4. Seahorses
   5. Water steps
   6. Hydrorider professional bike (water shoes required)
D. Determining the body's breathing rate related to exercise intensity through the Rate of Perceived Exertion (RPE) scale with explanation of warning signals alerting the body to slow down.
E. Water Aerobic DVD's.
F. Explanation of a water walk assessment which will be administered at the beginning and end of the semester to determine gains in water fitness. Private appointments may be set to assess student progress.
G. For variety, water volleyball (anaerobic activity) will be explained and played on a voluntary basis during the semester.
H. A sample of the following will be demonstrated and explained during mid semester for the student to have a well rounded water fitness education of vertical exercises to be used for volume training: Water Walking, Deep Water Running, Liquid Abs, Oodles of Work, Aqua Power Step, Splash Plyometrics, and Dynamic Stretching.
I. Proper breathing techniques will be discussed.
J. If lightening is occurring during class time or the pool is experiencing equipment problems, the class will meet on deck for a stretching program which include water fitness messages using caricatures.
K. During any emergency follow the directions of the Lifeguard such as, if alarm sounds all must exit building.

IX. ASSIGNMENTS:

Students will complete a medical health questionnaire on the first day of class. Private appointments will be set if necessary. For safety purposes, differentiation must be made for pool space and type of equipment with the following considerations:

1. Advanced swimmer vs novice or non-swimmer
2. Beginner exerciser vs experienced exerciser
3. Normal joints vs impaired joints
4. Negative buoyancy vs positive buoyancy
5. Height of individual

This will be accomplished during the first class meeting by discussion and explanation.

A Water Walk Assessment will be administered at the beginning of the semester to establish a comparison factor for the second one given during the latter part of the semester.

X. EVALUATION: Class participation is required. Evaluation will be based on recorded attendance, participation, assessments, etc. The student will receive a grade of Credit or No Credit for the course.
Non-participation in water exercises will not be condoned without a doctor's or instructor's approval.

XI. OTHER COURSE INFORMATION:

A. FITNESS TEST/SKILLS ASSESSMENTS: A water walk assessment will be administered at the beginning of the semester to establish a comparison factor for the second one given during the latter part of the semester.
B. ABSENCES: During fall and spring semesters a student is allowed two (2) absences for activity classes. Should a student obtain the third absence, he/she will not receive credit for the course. A limited number of make-ups will be allowed for emergencies. See the instructor for schedule.
C. SPECIAL ACCOMMODATIONS: In order for a student to receive disability accommodations under Section 504 of the Americans with Disabilities Act, he or she must schedule an individual meeting with the Director of Student Counseling Services **immediately upon recognition of their disability** (if their disability is known they must come in before the semester begins or make an appointment **immediately** upon receipt of their syllabi for the new semester). The student must bring with them written documentation from a medical physician and/or licensed clinician that verifies their disability. If the student has received prior accommodations, they must bring written documentation of those accommodations (example Individualized Education Plan from the school system). Documentation must be current **(within 3 years).**The student must meet with SCS **face-to face** and also attend two (2) additional follow up meetings (one mid semester before or after midterm examinations and the last one at the end of the semester). Please note that the student may also schedule additional meetings as needed for support through SCS as they work with their professor throughout the semester. Note: Students must come in **each semester** to complete their Individualized Accommodation Plan (example: MC student completes fall semester IAP plan and even if student is a continuing student for the spring semester they must come in again to complete their spring semester IAP plan). Student Counseling Services is located in Alumni Hall Room #4 or they may be contacted via email at MBryant@mc.edu or RWard@mc.edu . You may also reach them by phone # **601-925-7790.**
D. Tuition refunds will not be made to students who drop a class after the first week.

XII. INSTRUCTIONAL MATERIALS AND BIBLIOGRAPHY:

Text: None

Contemporary reference books:

Aquatic exercise association manual. (2013). Nokomis, FL: AEA.
Alexander, Christine. (2011). Water Fitness Lesson Plans and Choreography. Human Kinetics.

Classic reference books:

Baum, G. (1991). Aquarobics. London: Arrow Books Unlimited.
Baum, Glenda. (1998). Aquarobics-the training manual. W.B. Saunders.
Casten, C. (1994). Aqua aerobics today. St. Paul, MN: West.
Gibson, Terry-Ann Spitzer and Hoeger, Werner W. K. (1999). Water for fitness and wellness.
(1988). Soft workouts. Alexandria, VA: Time-Life Books.
Spritzer, T., & Hoeger, W. K. (1990). Physical fitness: The water aerobics way.

DVD's:

Milling, Pamela G. (2013). When water moves miracles happen

1. Aqua power step.
2. Athletic conditioning.
3. Deep water running.
4. Water aerobics.
5. Water walking.

PUBLICATIONS:

Milling, Pamela G. (2013. January). One Degree. www.mc.edu/water-fitness
Milling, Pamela G. (2012. April). Bone density revelation.
www.aeawave.com/news&more/healthynews.
Milling, Pamela G. and Ward PhD, Rob. (2011, April/May). Water fitness for athletes education and performance benefits. AKWA Magazine.
Sova, R. (1992, December). Water walking. AKWA letter.
Sova, R. (1994, February). Why use rpe? AKWA letter.

WEBSITE:

http://www.mc.edu/water-fitness
http://www.mc.edu/FACULTY/Milling,Pamela

RATE OF PERCEIVED EXERTION (RPE) SCALE

Imagine a scale from 0 to 10 which represents one's breathing rate and measures the intensity of the activity.

0	1	2	3	4	5	6	7	8	9	10

0 Total rest or sleeping; unaware of breathing. You will not experience this level during exercise.

1 Reading a book or sitting at your desk; unaware of breathing. You will not experience this level during exercise.

2 Getting dressed or taking a shower; unaware of breathing. You will not experience this level during exercise.

3 Walking to the other end of the house; slightly aware of breathing. You may experience this in the beginning of warm-up.

4 Walking a very short distance, breathing slightly elevated. Experience this level during warm-up.

5 Walking around the block or to a near-by store; breathing elevated but can carry on a conversation. Experience this level at the end of warm-up.

6 Continuing to exercise briskly while breathing becomes deeper but you're feeling good. Experience this level in the beginning of your aerobic session.

7 Exercising vigorously; breathing is heavier with a slight feeling of fatigue. Carry this level as long as you can comfortably during your aerobic session in order to reach maintenance.

8 Exercising very vigorously; breathing is much deeper with a feeling of fatigue. To become comfortable in this level, push to it for short periods after maintaining level 7. In maintenance, this difficult aerobic level produces rapid results.

9 90% workout; exercising very vigorously; breathing is labored; body fatigued. Some push to this level for very short periods after achieving level 8. This level difficult and should not be maintained.

10 100% workout; you feel as if you cannot catch your breath. Exercising too hard.