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The Design And Implementation Of A Diagnostic Health Fitness Program For The College Level Student

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THE DESIGN AND IMPLEMENTATION OF A DIAGNOSTIC HEALTH FITNESS PROGRAM FOR THE COLLEGE LEVEL STUDENT

by
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A practicum submitted to the Faculty of the Center for the Advancement of Education of Nova University in partial fulfillment of the requirements for the degree of Educational Specialist.

The abstract of this report may be placed in the School Practices Information Files for reference.

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Running Head: Diagnostic Health Fitness

AUTHORSHIP STATEMENT

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my own work, presented here, will earn similar respect.

William J. Klayer

ABSTRACT

THE DESIGN AND IMPLEMENTATION OF A DIAGNOSTIC HEALTH FITNESS PROGRAM FOR THE COLLEGE LEVEL STUDENT

Klayer, William J., 1987 Practicum Report, Nova University, Center for the Advancement of Education. Descriptors: Physical Education/Exercise/Physiology/ Physical Fitness/Physical Conditioning/Physical Performance/Fatigue (Biology)/Heart Rate/Muscular Strength.

The present physical education curriculum offered at the college are the traditional lifetime sport activities. This problem was addressed by the design and implementation of a Diagnostic Health Fitness program for the college level student. The program's aims are to provide students with a basis for intelligent selection of habits, behaviorisms—and programs to enable them to maintain a high quality of health and fitness throughout a lifetime. The program is composed of three major components: orientation (informing), student performance assessments, and execution (exercise prescription and monitoring). Assistance in procedures, execution of activities and evaluation monitoring are built within the program.

(Appendices include a course syllabus, health/ fitness questionnaire, fitness and nutrition quiz, health/fitness assessment consent form, physicians consent form, physical fitness assessment form, cardiovascular disease risk factor profile, student exercise prescription form, warm-up and cool-down form, exercise log, Nautilus training principles, Nautilus gym policies, liability release, Nautilus training card, daily caloric intake form.)

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Chapter 1

PURPOSE

A community college in the southeast is the site for this practicum. The college has been in existence for thirty-three years and serves a population of just over 400,000 spread over two counties. The financial backbone of these two counties is supported by light industry, many small businesses, with the primary industry being tourism and those trades related to tourist consumption.

The school community population is composed of families that span both ends of the economic scale. The two county area from which the student body is drawn varies from apparent poverty to considerable affluence. The income of more than one third of the community is between $7,001 and $22,000. Less than one fifth have an income range between $22,001 and $32,000. The median age of the college students is twenty-six years. More than one third of the student population is married with children; about one tenth are single parents. The ethnic consideration of the student body is reported to be eighty-six percent blacks, and eight percent mixed nationality.

The community college is a comprehensive public college that offers educational programs and services in the areas of liberal arts, adult education, occupational technologies and cultural enrichment. It has a teaching faculty of 186, administrative staff of 332, and an operating budget just over twenty-three million dollars for maintenance, salaries, operations and capital expenditures.

The college provides leadership in change by developing and modifying programs that are in accordance with the changing needs of the students as individuals, the community, the state and the nation. The educational and cultural needs of the colleges' constituency, regardless of prior academic background, are met through the development of innovative curriculum programs and creative instructional implementation. The college is an equal opportunity-equal access institution; as such, the college engages in a strong reciprocal working relationship with the community, with business, industry and with other educational and state agencies.

In recent years the concept of healthier lifestyles and the promotion of physical fitness has

captured the interest of the American public encouraging them to learn about and participate in health and fitness related activities.

Research has repeatedly demonstrated that physical exercise is directly related to the ability to meet the demands of the environment, specifically, to develop perseverance, resistance of fatigue, and to preserve the energy for a dynamic quality lifetime.

In 1983, the state legislature adopted minimum state high school graduation requirements beginning with the 1986-87 school year. One area of critical concerns for the physical education curriculum was the reduction of required credits in health and physical education. While reducing the credit requirement the 1984 state legislature further mandated that all high school students be provided with a basic physical education course focusing on the assessment, improvement and maintenance of personal fitness that will contribute to the compelling state and national interest of having a physically fit citizenery. (Florida Legislature, 1984)

A program to guide individuals further should be implemented at the college level so that the public will have full understanding of the component parts of

a complete physical fitness profile. To meet the above criteria and to fulfill what is a gap in the educational curriculum in the existing system, a course should be devised and implemented at the community college.

The present physical education courses offered in the health and fitness department, of which the author is a member, are the traditional lifetime sport activities. Besides an Aerobics I class, encompassing high cardiovascular endurance, there are no classes to provide a basis for intelligent selection of habits, behaviorisms and programs, enabling students to maintain and participate in vigorous physical activity as an integral component of a healthy lifestyle.

Students enrolling in the Diagnostic Health Fitness class will meet for twelve weeks, three times a week for one hour. These three hours will be designed for approximately twenty minutes of lecture, class discussions, exercise demonstrations, individual fitness assessments, individual exercise prescription, guest speakers, exercise workouts, food and exercise record keeping and 30 minutes of activity.

The author expects participants in this program to achieve the following major learning objectives:

1. Understand the basic components of fitness and how they apply to a training program.

2. Understand the basic principles of good nutrition and proper eating habits.

3. Develop cardiorespiratory endurance through class participation in aerobic activities.

4. Understand the total fitness assessment and the coronary risk factors and how they apply to his/her personal quality of life.

5. Improve strength and flexibility through class participation in Nautilus and exercise.

6. Understand common fitness injuries, how they occur, and how to properly treat them.

7. Develop a program of lifetime fitness from the many selected fitness activities as presented in class.

8. Understand the causes of stress, and develop coping strategies and relaxation exercises.

What this researcher hopes to achieve after implementing this program is a 60 percent or better average of the cognitive testing results and a 50 percent projected raise of the physical fitness levels of all tested areas. This 50 percent projected raise of the physical fitness levels should be interpreted

as an overall raise for the total number of students tested.

It is the hope of this writer that successful evaluation of the practicum by the college administration will result in the course being introduced into the college curriculum offerings.

Chapter 2

RESEARCH AND SOLUTION STRATEGY

Research indicated that there is no best strategy or method for implementing a Diagnostic Health Fitness Program. There is, however, much support for the existence of some type of fitness instruction and programming at the college level.

The period between eighteen and thirty years of age are the formative years for establishing physical fitness. At this time, the body reaches the peak of maturity and physiologic functioning. (Buchner, 1985)

In the early nineteen hundreds infectious diseases such as influenza, polio, diptheria and tuberculosis were the most common health problems in the United States. Time and the advancement of medicine eliminated these diseases, but advanced technology and changing lifestyles have brought about whole new health related diseases such as hypertension, arteriosclerosis, coronary disease, strokes, and cancer. Research has concluded that the leading causes of death in this country today are basically lifestyle related and approximately eighty three percent of these deaths prior to age sixty-five are preventable. (Halger, 1986)

"The President's Council on Physical Fitness and Sports recently conducted a survey to determine the fitness status of adults in the United States, and the results indicated that approximately 45 percent of all adult Americans do not engage in physical activity for the purpose of exercise and a large majority of the 55 percent who do exercise participate for such a short period of time that it may be questionable whether they are receiving many positive benefits." Allison (1980:1)

Evidence of the above problem is being looked at very seriously from the corporate sector of our nation. They have found through research that not only will millions of dollars be saved in medical cost, but companies which have and promote prevention, health and fitness programs have "less absenteeism, hospitalization, disability, job turnover rates, premature death, and health cost, as well as increased morale and job productivity." Halger (1986:7)

Most experts in the field of physical fitness agree that "the components of fitness are cardiorespiratory endurance, muscular strength, muscular endurance, joint flexibility, body composition, nutritional fitness, mental and emotional fitness and motor

fitness." Fox (1987:7) By using these major components as guides this author set out to find physical fitness curriculum models that have proven successful at other institutions.

John O'Connor, an instructor at the United States Military Academy, indicated, "with fitness a national vogue, personal conditioning has become one of the most popular new courses." O'Connor (1982;50) The format of their course incorporated lectures on fitness fundamentals and practicing these principles through exercise with their main objective to teach students how the body functions and to begin an organized instructor-supervised exercise program. (O'Connor, 1982) This type of program is most beneficial but lacks a major aspect of a fitness program, meaning testing and evaluation.

The University of Nebraska-Lincoln introduced a course called "healthy lifestyles." The course's major objective was student behavioral modification and commitment to a more healthy lifestyle. (Sienna, 1979) Although a class of this nature will guide students toward better health habits and self enhancing behaviors, it does not meet the criteria of total physical fitness objectives.

It is interesting to note when comparing physical fitness programs at various institutions of higher learning, one finds programs are based on the definition perceived by the administrators of the programs. Ithaca College, Ithaca, New York has a fitness program built entirely on improving ones cardiovascular endurance by using ones perceived exertion and heart rate. (Burke, 1979) Dickinson College, Carlisle, Pa., has a program "known as Self Paced Physical Education, the program is designed to give students optimum flexibility to participate in an activity of their choice." Watkins (1986:10) This program allows students to design a program of their own choosing in consultation with a faculty member or enroll in a program designed by the faculty. The above programs are all successful in getting people involved in some type of physical activity but they need to be expanded to include the total concept of physical fitness. For as we are experiencing "most Americans lack an adequate knowledge of physical fitness and do not possess the skills necessary to make regular activity a consistent part of their lives." Steinhardt (1986:24)

This researcher, along with two colleagues from the health and fitness department, visited Palm Beach

Community College, Broward North Community College, and Miami Dade Community College to see first hand their physical fitness programs in operation. After discussions with faculty members from the three institutions, regarding their facilities and class structures, conclusions regarding this author's formation of a sound fitness program were formulated.

There are many physical education, wellness and fitness program models to draw working program objectives. The institute for aerobic research has validated an eight element process to maximize fitness and behavior change and to facilitate adherence which this author believes to be the very basic guides to use when implementing a total fitness program. "The eight elements include (1) medical screening to ensure safe exercise risks (2) fitness and lifestyle assessment (3) individual goal setting, (4) exercise and nutrition prescription (5) supervised group starter activity programs (6) educational classes (7) a structured motivation and reinforcement system (8) an on-going feedback system." Cooper (1984:36)

In a program based on the objective of lifetime fitness with a curriculum formulated to personal fitness needs "each student would be able to appraise

his/her current level of physical fitness, participate in a fitness program designed at the optimum frequency, intensity, and education for developing physical fitness, and understand the health-related outcomes to be gained from being a physically fit person. At the same time, instruction would be designed to achieve key behavioral outcomes that influence the decision to engage in a personal fitness program. Dishman, as quoted by Steinhardt (1986), contemporary views of the problem of inactivity would be included in the curriculum, as well as the behavioral skills necessary for adopting and maintaining a program of regular exercise. These skills would be combined with the knowledge and self-regulatory skills needed to facilitate a personal fitness program, so that motivation for sustained participation and positive health-related outcomes could be optimized." Steinhardt (1986:28)

The mid-eighties is a time when education has been pressed to achieve excellence at all academic levels. Along with the "excellence movement" is the push for "voucher or cost effective education." Finn (1987:4) With money at a premium the implementation of a diagnostic health fitness program will be relatively inexpensive at this institution.

Existence of present facilities such as the gymnasium, nautilus equipment, bicycle ergometers, swimming pool, par-course, classrooms and the addition of the recently employed exercise physiologist make major capital outlay negligible at this time.

Chapter 3

METHOD

The practicum program was a Diagnostic Health Fitness course lasting for twelve weeks. Instruction consisted of twenty minutes of lecture and approximately 30 minutes of activity, three times a week.

The first two weeks of the class were devoted to orientation, the distribution of a course syllabus (Appendix A : 38), student questionnaires, information forms, and the name of the text which was required for the class. At this time a Health/Fitness Questionnaire was given. (Appendix B : 41) This questionnaire was kept personal for it requested indepth information pertaining to any medical treatment, and/or conditions, immediate family medical history, and any orthopedic, visual or neuromuscular limitations that my have existed. The questionnaire also asked for information about the partaking of drugs, alcohol or tobacco. Along with information about exercise and any known behavior problems or modifications. Also, during this period a pretest quiz of the students fitness and nutrition knowledge (Appendix C : 45) was administered. This quiz gave the instructor some insight of the experience, depth and understanding the group, as a

whole, had of fitness and nutrition. A health/fitness assessment and exercise prescription consent form (Appendix D : 48) and a physicians consent (Appendix E : 52) was distributed informing the students of the physical activities and testing that was performed. By signing the student personal consent form, it was stressed to the student that they had entered the program of their own freewill and they may withdraw from the testing, training or course. Prior to beginning any exercise program, it is essential to have a physician's check-up. The physician's consent form explains to the doctor what the patient would be participating in. If there were any limitations or restrictions, comments could have been made in the appropriate areas. Both of these forms had to be signed by appropriate parties and returned to the instructor.

Prior to the beginning of any lectures or physical activity, a pretest Physical Fitness Assessment (Appendix F : 56) was conducted with each student. The students made an appointment with the instructor for their fitness evaluation test which took approximately twenty minutes.

The physical fitness assessment was composed of resting heart rate and resting blood pressure test;

flexibility test using a flexibility bench; vital capacity testing with a vitalator, spirometer or a flo scope-peak expiratory flowmeter; body composition measured with a tape measure and Lang skinfold calpers; strength testing with the use of dynamometer, bench press, pull up bar, leg press and a backleg-chest dynamometer; muscular endurance test. Using a one minute sit up test; submaximal bicycle test using a ergometer bicycle, stopwatch, stethescope and metrancne. A blood lipid profile can be given to the students, at a minimal cost to the student, through a local lab.

At the completion of all the testing and information, gathering a cardiovascular Disease Risk Factor Profile (Appendix G : 61) was given to each student with a discussion about the results. The scores on the risk factor profile helped each student identify individual factors which would increase their risk factors and what factors they could modify to reduce their risk. It also allowed the student to follow trends in certain risk factors by comparison of their present level with their previous and/or subsequent data. The cardiovascular risk profile compiled by the American College of Sports Medicine with the help of other medical specialists list certain "risk factors"

that have been identified, which seem to predispose an individual to, or at least are associated with, the development of coronary heart disease. These risk factors are: blood pressure, cigarettes, body fat, tension and stress, family history, age, physical activity, cardiovascular fitness, cholesterol, high-density lipoprotein (HDL) ratio, triglycerides and glucose.

The third week of class involved the instruction of physical fitness and class discussions about the material covered in the first three chapters of their text. These chapters covered physical fitness and its component parts, the relationship of the body systems and the importance of participation. Also, covered were the considerations, precautions, and expected results incurred when planning a training program. Final emphasis involved explanation of the energy systems, aerobic verses anaerobic metabolism training and different training techniques for improving cardiorespiratory endurance. Along with the textbook material the students exercise prescription forms (Appendix H : 64) were distributed with a discussion of the tabulated results gathered from the Health/ Fitness Questionnaire, the Physical Fitness Assessment Test and the Cardiovascular Risk Factor Profile.

The exercise prescription gave the student the components of an exercise session: purpose, time and intensity; a warm-up period, stimulus (suggested activity or activities) and a cool-down period. (Appendix I : 66) The warm-up and cool-down activities were twelve suggested exercises with a time faculty of 8.5 minutes for warm-up and 6.5 minutes cooling down. The work variables on the exercise prescription are broken down into mode, frequency, duration in minutes starting from the initial stage to the progressive stage and the maintenance stage. The intensity of work load during the forementioned three stages was a precentage of the students maximum heart rate. Space was provided on the prescription form to record one's weekly progress.

An Exercise Log (Appendix J : 68) was handed out to the students with instructions on how to record the data from the activity they chose to do, three times a week, independent of the three hour per week class activity

Strength training was introduced during the fourth week of class. An introduction and demonstration of Nautilus equipment and training principles (Appendix K : 69) was presented. The Nautilus gym policies

(Appendix L : 72) were explained along with a liability release (Appendix M : 75) and the Nautilus Training Card; (Appendix N : 77) which was used to keep a record of one's progress. Chapter 4 of the text covered more detailed information about the anatomy and physiology of skeletal muscle; the physiology of strength development; factors which determine strength and different methods of improving one's strength. Also, during the week a field trip was taken to one of the local fitness centers for a demonstration of techniques and correct procedures to follow when working with free weights.

Selected lifetime fitness activities was the theme for week five. Chapter 10 looked at the many varieties and facets of fitness activities with pros and cons concerning each. A tour of the college's fitness par-course was conducted with explanations and demonstrata-tions of the various exercise stations throughout. Safety procedures were explained when using the pool area and the pool itself. Also, an explanation on the use of the bicycle ergometers; cautions to use when choosing various aerobic dance exercises, jogging, jumping rope, long distance bicycle riding and calisthenic exercises. Also, during week five the students began their strength training workouts at scheduled times during the last twenty minutes of

class or at times arranged with the Nautilus monitors. At the end of the week a test covering material from Chapters 1, 2, 3, 4, and 10 was given.

Week six was devoted mainly to the idea of developing flexibility. Chapter 5 of the text had many different types of flexibility exercises which were used in a circuit training technique. In this way the student had a basic idea of circuit training. Also, warm-up and cool-down stretching techniques were stressed. During this week the students exercise logs were evaluated to see if there were any mid-course corrections needed.

The main theme of week seven was the treatment and management of common fitness injuries. Chapter 8 discussed problems associated with muscle strains, soreness, tendonitis, lower back pain, ankle and foot injuries, and heat stress. The first part of week seven the students began their individualized workouts according to their exercise prescriptions. These workouts were done during the last 30 minutes of each class.

After checking to see if the students were meeting their workout obligations it was found that some students were not attending their exercise sessions.

To address this problem, student monitors were hired through the schools workstudy program to supervise and monitor appointment times. Attendance was improved.

Week eight consisted of discussions from Chapter 6 regarding methods for gaining weight, methods of losing weight, estimation of caloric expenditure, weight control and maintenance of body composition. During this week the students recorded their daily caloric intake (Appendix O : 79) with discussion and comments during week nine. At the end of week eight, a second test was given over Chapters 5, 6, 8, of their text. The students continued to report to their exercise areas during the last half of each class period.

A dietitian from one of the local hospitals spoke on basic nutrition and fitness, highlighting week nine. A discussion and comment session was held regarding the students worksheets containing information on their caloric intake for a seven day period. This discussion session coincided with Chapter 7 of their text regarding nutrition and fitness. The students continued to report to their exercise areas during the last half of the class.

The tenth week of the practicum period covered Chapter 9, management of stress, with emphasis on the warning signs, types of stressors and coping with stress. The students learned the benefits of physical activity and practiced some relaxation techniques uesed in reducing stress. The students continued to report to their exercise areas during the last half of class.

Week eleven of the class involved post testing and collection of the students workouts logs. The students were given the physical fitness assessment test again in hopes of showing a significant gain in all areas tested. The fitness and nutrition test was administered again with a fifty percent or better score anticipated. These post tests were completed during class time with the students completing their individualized exercise program by the last day of the week.

The twelfth and final week of the program involved a written test of Chapters 7 and 9, a written evaluation of the course by the student (Appendix P : 81) and an explanation of their final grade.

Chapter 4

RESULTS

A pre and post test measuring the students fitness assessment levels were administered. The difference between initial and post assessment, as tables 1, 2 and 3 indicate, actually shows a greater than fifty percent increase in the areas of Abdominal Strength (sit-ups), Vital Capacity, Trunk Flexion and Sub-Maximal Bike Test (Cardiovascular Endurance). In the areas of shoulder/joint flexibility, trunk extension, grip strength and body fat. Composition there was less than a fifty percent increase.

The results indicated that the percentages provided evidence that some students progressed to a greater than fifty percent increase in physical fitness levels; while others progressed, but to a less than fifty percent increase.

Those results indicate more planning is needed in the development and design of activities that increase grip strength, flexibility and control diet to decrease body fat composition.

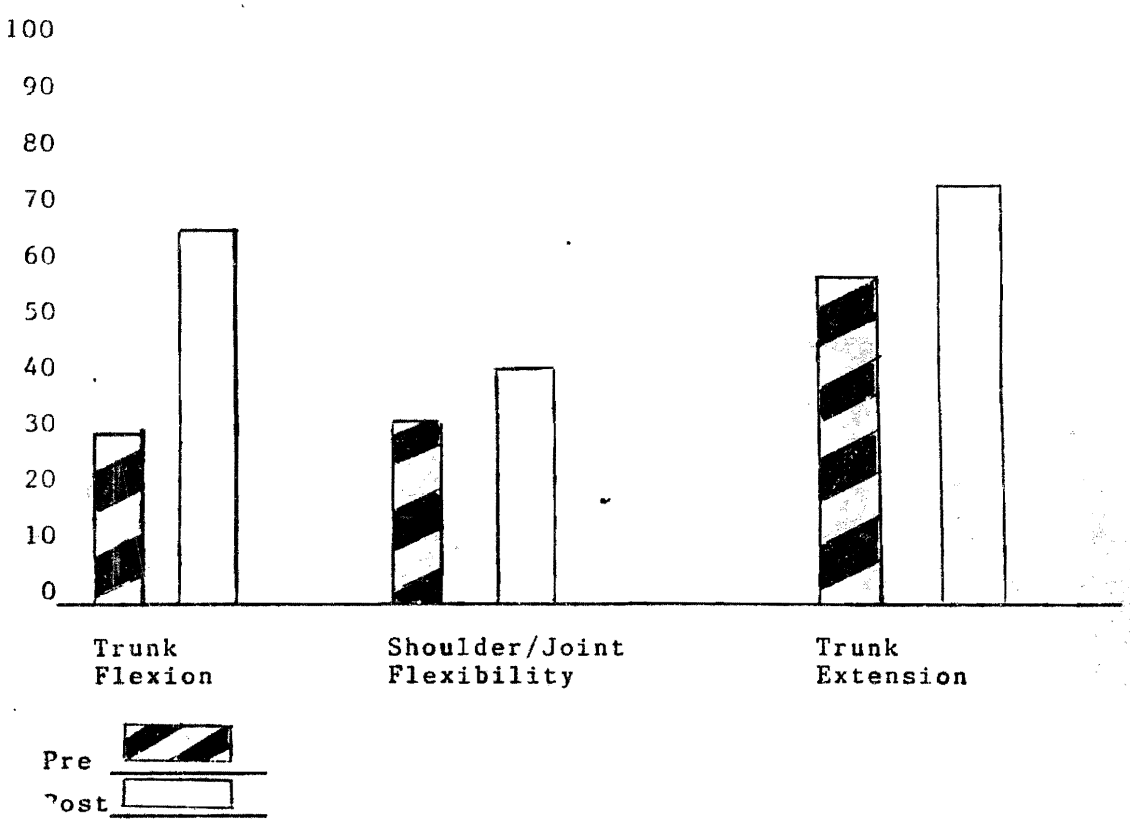
The post test results of the students knowledge assessment, as indicated by table 4, were higher than the sixty percent anticipated.

The impact of the results strongly suggests the strategies used were more than adequate in helping the students acquire a complete understanding of the component parts of physical fitness, how to safely achieve a high degree of fitness measurement techniques to assess a fitness level, means to establish sound nutrition and exercise habits, and helpful hints to making lifestyle changes involving diet, exercise and stress.

From the overwhelming success of the practicum the college administration has given the program permanent course approval with three hour credit, applicable toward graduation. Eighty-five thousand dollars has been budgeted for the purchase of additional workout machinery and testing equipment. The program title has been changed from Diagnostic Health Fitness to Fitness Assessment and Improvement in order to more accurately describe to registering students the class structure and activites involved.

Table 1

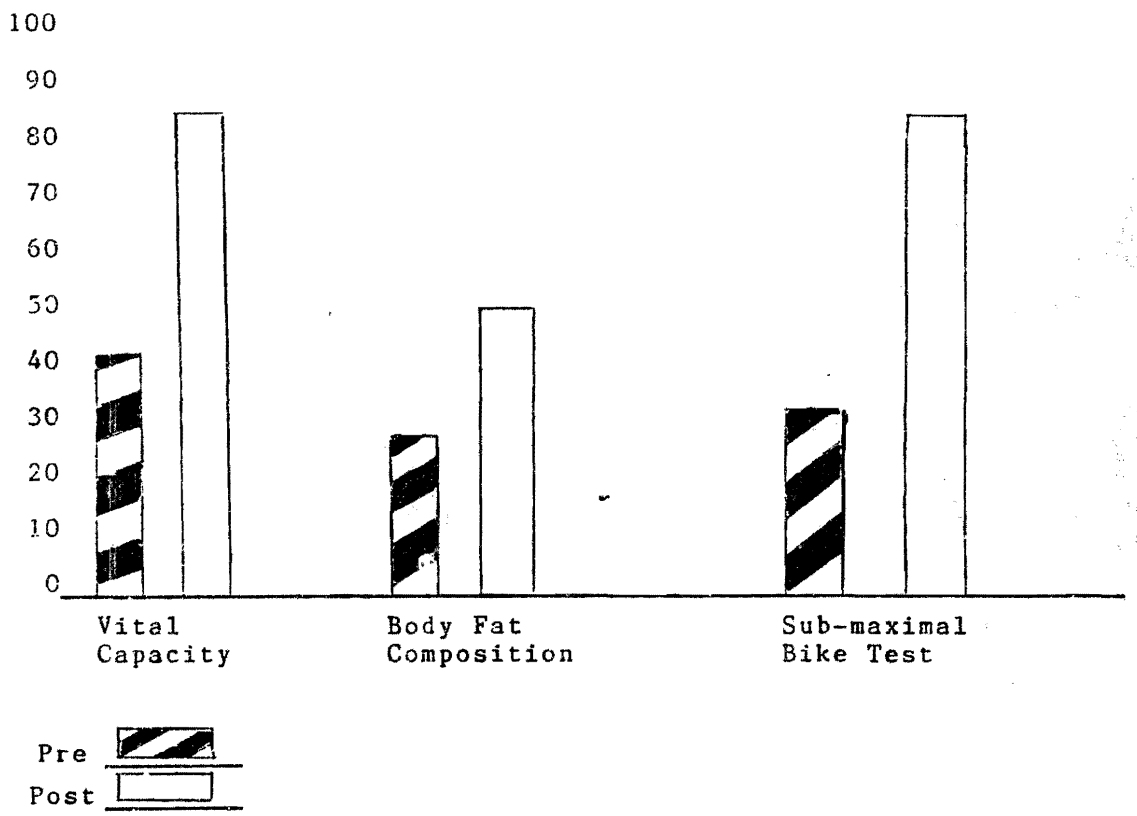
Percentage Assessment Scores



Forty-eight (48) students were administered both the initial and concluding fitness assessment.

Table 2

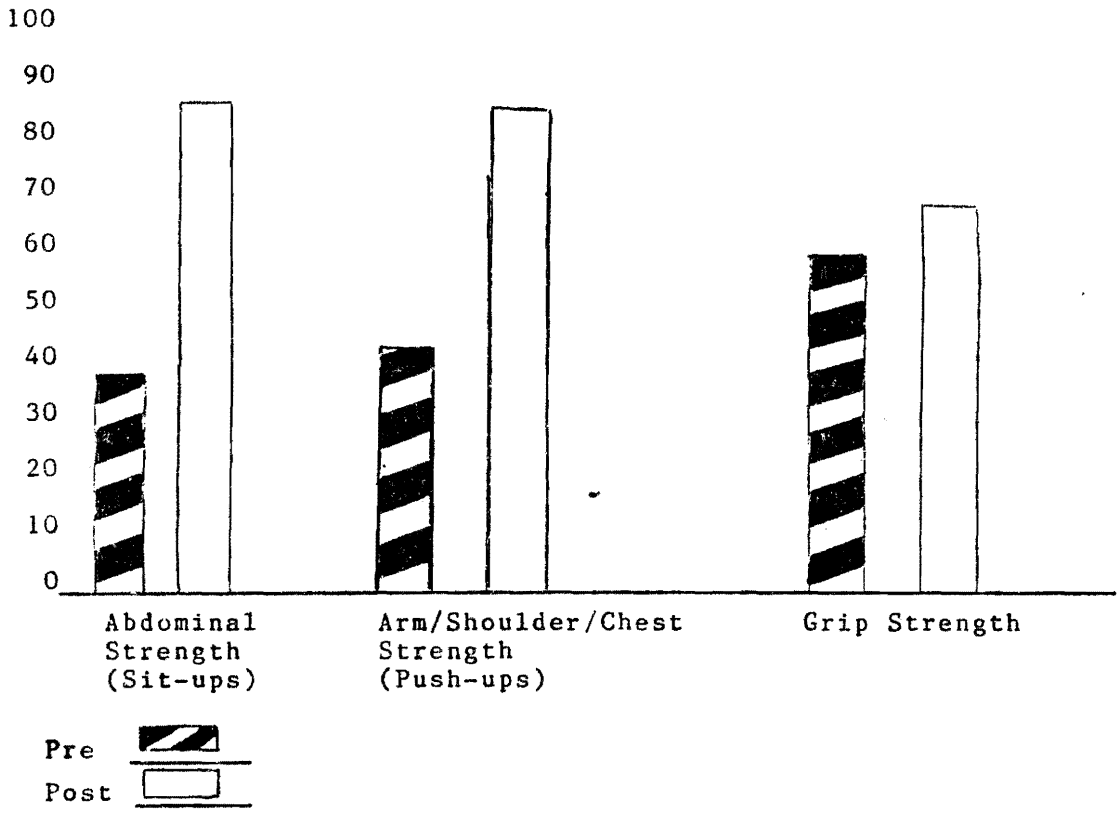
Percentage Assessment Scores



Forty-eight (48) students were administered both the initial and the concluding fitness assessment.

Table 3

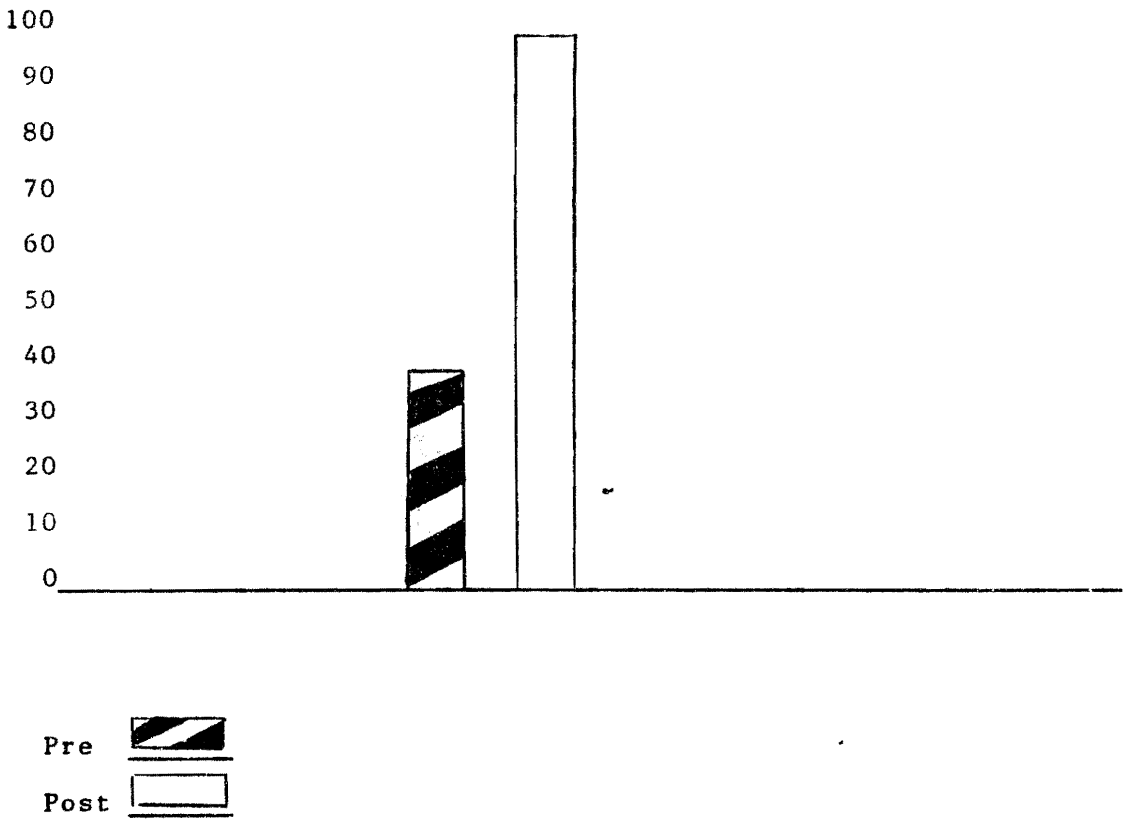
Percentage Assessment Scores



Forty-eight (48) students were administered both the initial and the concluding fitness assessment.

Table 4

Percentage Knowledge Scores



Forty-eight (48) students were administered both the initial and concluding knowledge assessment.

Chapter 5

RECOMMENDATIONS

How best to serve the students has been the concern of professionals at the national, state and local levels and is evident in the conception of this program. At the conclusion of the twelve week study, recommendations gathered by the writer and through suggestions made from the student evaluations will help in the implementation of any future programs of this kind. These recommendations are:

1. Schedule class times to meet a minimum of one and half hour sessions. This would allow proper time for class lectures, discussions and workouts.
2. Have an adequate number of monitors available to cover all workout areas.
3. Supplement program with audio visual materials.
4. Stay abreast of the availability of new materials and texts so as to be made aware of new trends in the subject area.
5. Enlist the services of professionals as classroom speakers to give greater credibility to subject matter.

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REFERENCE LIST

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Holger, Werner W. K. Lifetime Physical Fitness and Wellness. Colorado: Morton Publishing Company, 1986.

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Allsen, Phillip E., Joyce M. Harrison, and Barbara Vance. Fitness for Life. 2nd Ed. Iowa: Wm. C. Brown Company Publishers, 1980.

The book is designed to take individuals from their current level of fitness and directs them, through understanding of fitness concepts and principles, to make correct choices and decisions to become and remain physically fit for their entire life.

Cooper, Kenneth H., and Collingwood, Thomas R., "Physical Fitness Programming Issues for Total Well Being" Journal of Physical Education and Recreation. March 1984, pp. 35-36, 44.

This article deals with the success or failure of programs and explains that the bottom line for a good program is accountability, in terms of leadership, program and facility, and organization.

Finn, Chester E., "Radical Changes Needed in Educational Deliver." The Education Digest, 1002. January 1987, pp. 2-5.

The main theme of the article is to decentralize, empower and deregulate public educational systems so individual schools could become the forgers of means-curricular, pedagogical, organizational and the appropriate unit of accountability for performance.

Fox, Edward L., Timothy E. Kirby and Ann Roberts Fox. Bases of Fitness. New York: MacMillan Publishing Company, 1987.

The book provides interpretation of fitness for persons beginning an exercise program. It is particularly designed for students who do not have a background in the science of exercise but who have an interest in developing an appropriate and well-rounded fitness program.

Hoeger, Werner W. K., Lifetime Physical Fitness and Wellness. Colorado: Morton Publishing Company, 1987.

The book is written to teach an individual, step by step procedures, to take control of their own personal health and lifestyle habits so that one can make a constant and deliberate effort to stay healthy and to realize their highest potential for well-being.

O'Conner, John S., "The Physical Activity Program Innovations." Journal of Physical Education Recreation. May 1982, pp. 50-51.

This article concerns philosophy changes evolving in physical education. It discusses why physical education is moving away from team sport concepts to activity courses featuring fitness, recreation and outdoor adventure programs.

Sienna, Phillip A., and Amur Jeffery B., "Healthy Lifestyles A Giant Step for Students." Journal of Physical Education and Recreation. October 1979, pp. 21.

This article deals with the importance of teaching the concepts of physical fitness so the average American can understand and recognize a need to change present lifestyle habits now and in the future.

Steinhardt, Mary A., and Stueck, Patricia M., "Personal Fitness A Curriculum Model." Journal of Physical Education and Recreation. September 1986, pp. 23-28.

This article deals with curriculum and explains three main model areas of interaction: physical fitness components, health-related objectives, and individual characteristics.

Watkins, David L., "Dickinson Offers Self-Paced Programs." Journal of Physical Education and Recreation. September 1986, pp. 10.

This article explains the two different self-paced physical fitness programs. Program one is designed by a faculty member for the student and program two is designed by the student in consultation with a faculty member.

APPENDICES

APPENDIX A: COURSE SYLLABUS

DIAGNOSTIC HEALTH FITNESS

Text and Other Materials: Bucher and Prentice, Fitness for College Life. This book may be purchased in the Campus Bookstore.

Clothes for exercise participation-shorts, exercise shoes, shirt and towel. A bathing suit will be used when the weather improves.

Class Time: 1:00 PM-1:53 PM Mon., Wed., and Fri.

Class Location: Bldg. 4 Room 104, Fitness Trail, Nautilus, Pool, and Gymnasium.

Class Policies:

1. Class will begin promptly on time and end at the scheduled hour. Attendance will be taken at the beginning of the class hour. Lateness past 15 minutes will be recorded as an absence.
2. Each student should be dressed out for exercise each class period. Types of activities for each day will be announced ahead of time and points will be deducted for not being properly attired.
3. Attending all sessions is recommended in order to get the most knowledge and fitness from the class.
4. All reading assignments should be completed before classtime, and will be announced. All examinations will be announced well in advance, with no make-ups given.
5. Strength workout sessions must be scheduled and attended as scheduled.

Major Learning Objectives: The student should be able to:

1. Understand the basic components of fitness and how they apply to a training program.
2. Understand the basic principles of good nutrition and proper eating habits.
3. Develop cardiorespiratory endurance through class participation in aerobic activities.
4. Understand the total fitness assessment and the coronary risk factors and how they apply to his/her personsal quality of life.
5. Improve strength and flexibility through class participation in Nautilus and exercise.
6. Understand common fitness injuries, how they occur, and how to properly treat them.
7. Develop a program of lifetime fitness from the many selected fitness activities as presented in class.
8. Understand the causes of stress, developing coping stratigies and relaxation exercises.

Course Content:

1. Individual Fitness Assessment at the beginning of the course and exercise prescription and assessment at the conclusion of the course.
2. Basic principles for a training program
3. Cardiorespiratory endurance
4. Improvement of strength through weight training
5. Flexibility development
6. Weight control and Maintenance of body composition
7. Basic Nutrition and Fitness
8. Common Fitness Injuries
9. Stress Management
10. Selected Lifetime Fitness Activities

Course Evaluation:

Class Participation: Daily attendance, fitness assessment 46 class periods
200 points — Subtract 5 points for each class absence

Written Examinations: Three exams will be given, 50 points each.
150 points

Fitness Prescription Workout: An exercise workout program will be assigned each student. The student will follow this schedule, recording heart rate, intensity and duration. This program will be designed for three 30-45 minute sessions per week.
200 points

Class Assignments:
50 points — Nutrition questionnaire and Food Record will be completed by each student.

Total Points for Course:
600 points

600-550 A
549-500 B
499-450 C
449-400 D
399-0 F

APPENDIX B: HEALTH/FITNESS QUESTIONNAIRE

HEALTH/FITNESS QUESTIONNAIRE

Name: _____ Date: _____

Year/Sem: _____ Student No. _____

Sex: _____ Age: _____ Ht: _____ Wt: _____

Birthdate _____ Telephone: _____

Local Address _____ Zip: _____

Check below any medical treatment, condition, or problems that concern you.

Personal Medical History

I. Heart and Circulatory

	Yes	No	
a.	_____	_____	Heart attack
b.	_____	_____	Stroke
c.	_____	_____	Valve Problems
d.	_____	_____	Heart Murmur
e.	_____	_____	Enlarged Heart
f.	_____	_____	Irregular Heart Beat
g.	_____	_____	Atherosclerosis
h.	_____	_____	High Blood Pressure (Controlled)
i.	_____	_____	High Blood Pressure (Uncontrolled)
j.	_____	_____	Rheumatic Fever
k.	_____	_____	Rheumatic Heart
l.	_____	_____	Rheumatic Fever with resulting Murmur
m.	_____	_____	High Triglyceride Level
n.	_____	_____	High Cholesterol Level
o.	_____	_____	Varicose Veins
p.	_____	_____	Anemia, Sickle Cell (Controlled)
q.	_____	_____	Hemophilia
r.	_____	_____	Diabetes, (Controlled)
s.	_____	_____	Diabetes, (Uncontrolled)
t.	_____	_____	Other, specify _____

II. Respiratory

	Yes	No	
a.	_____	_____	Emphysema
b.	_____	_____	Bronchitis
c.	_____	_____	Pneumonia

	Yes	No	
d.	_____	_____	Asthma
e.	_____	_____	Lung Disease
f.	_____	_____	Other, specify _____

III. Cancer

a.	_____	_____	Breast
b.	_____	_____	Cervix
c.	_____	_____	Uterus
d.	_____	_____	Prostate
e.	_____	_____	Lung
f.	_____	_____	Colon
g.	_____	_____	Other, specify _____

IV. Family Medical History (Immediate Relatives)

a.	_____	_____	Heart Attack
b.	_____	_____	Stroke
c.	_____	_____	Athersclerosis
d.	_____	_____	High Blood Pressure
e.	_____	_____	Diabetes
f.	_____	_____	Lung Disease
g.	_____	_____	Cancer, specify _____
h.	_____	_____	Hemophilia
i.	_____	_____	Respiratory Problems
j.	_____	_____	Heart Surgery
k.	_____	_____	Heart Related Surgery
l.	_____	_____	Other, Specify _____

Check Items that apply

l.	_____	_____	Father died of heart attack before 60?
m.	_____	_____	Mother died of heart attack before age 60?
n.	_____	_____	Father died of cancer?
o.	_____	_____	Mother died of cancer?

V. Orthopedic - Visual - Neuromuscular

a.	_____	_____	Orthopedic leg or arm problems
b.	_____	_____	Balance/Equilibrium
c.	_____	_____	Neuromuscular Disorder/Coordination
d.	_____	_____	Arthritis
e.	_____	_____	Vision limitations
f.	_____	_____	Auditory limitations
g.	_____	_____	Other, Specify _____

VI. Exercise

a. Do you exercise? _____Yes _____No

b. Is your effort? _____ Minimal _____Mod. _____Max.

c. How often do you exercise? _____(days per week)

d. For what duration? _____ (minutes per workout)

e. What kind of exercise do you presently engage in? _____

_____

VII. Tobacco

a. Do you currently use tobacco? _____ Yes _____No

b. What type of tabacco? _____Cigarette _____Cigar

_____ Pipe _____Chewing

c. If yes, for how long? _____

d. Amount smoked per day _____

e. If you do not currently use tobacco, have you ever used it? _____ Yes _____No

f. If yes, how long ago did you quit? _____

VIII. Alcohol

a. Do you currently drink alcohol? _____Yes _____ No

b. If yes, how much do you drink? _____(drinks per week)

IX. Drugs

a. Do you use any drugs other than those prescribed by your physician?

_____Yes _____No

b. If yes, specify _____

c. How often? _____

X. Behavior

a. Do you handle stress well? _____ Yes _____ No

b. Check items which best describe you:

_____ generally happy, carefree

_____ usually calm, relaxed

_____ often depressed, sad

_____ tense, worry a lot

_____ agressive, hard-driving

c. Have you ever had any serious emotional problems? _____ Yes _____No

d. Have you ever attempted suicide? _____ Yes _____No

e. Do you consider your job stressful? _____Yes _____No

f. How many hours of sleep do you get per night? _____

g. Do you eat regularly (3 times/day), balanced meals? _____Yes _____No

XI. Please list any which apply:

a. Medication you are presently taking

_____

_____

_____

b. Surgery(ies) which you have had/date

_____

_____

_____

c. Injuries/date

_____

_____

_____

APPENDIX C: FITNESS AND NUTRITION QUIZ

FITNESS AND NUTRITION KNOWLEDGE QUIZ

We are bombarded daily with information on fitness, stress management, nutrition and exercise; take this quiz to determine your level of knowledge. Underline your selection for each question.

T F 1. Strong muscles make you muscle bound and less flexible.

T F 2. Women should avoid exercise because they will develop large muslces and lose their femininity.

T F 3. When you stop exercising your muscles will turn to fat.

T F 4. Proper exercising is very time consuming.

T F 5. Massage is the best way to get rid of cellulite.

T F 6. Running is the best general exercise for fitness.

T F 7. Strength training is good for your muscles but not for your heart.

T F 8. The older you are the less you need to exercise.

T F 9. Exercise once in a while is better than none at all.

T F 10. Exercise increases your appetite and makes you eat more.

T F 11. Different exercises are needed depending on whether you want to gain strength or increase flexibility.

T F 12. Strong muscles are needed only if you are an athlete.

T F 13. Heat should be applied to an injury immediately after it occurs.

T F 14. The Nautilus and Universal Gym equipment develop strength using the principle of isometrics.

T F 15. The use of steroids for strength development is the easiest and safest means for tremendous strength gain.

T F 16. The age at which muscular strength is at its peak is 20-25 years of age.

T F 17. The three primary risk factors for developing coronary heart disease are: cigarette smoking, high blood pressure, and high cholesterol.

T F 18. A person should stop and rest in a sitting position after completing a strenuous workout prior to cooling-down.

T F 19. When selecting a jump rope, the rope should be long enough so that the handles come up to the level of the hips when the rope is placed under the feet.

T F 20. When doing a strength training workout on the Nautilus equipment, one should do as many repetitions as possible at a lighter amount of weight.

T F 21. When exercising the overload principle must be practiced for development of strength and cardiorespiratory endurance.

T F 22. As a person gains weight the number of fat cells increases.

T F 23. The best overall exercise with the least amount of pressure on the joints is cycling.

T F 24. The best way to develop flexibility is with bouncing movements.

T F 25. A person should exercise strenuously every day to be fit.

T F 25. Red meat is the single best source of protein.

T F 26. The best way to build muscle is to eat extra protein.

T F 27. One gram of protein or one gram of carbohydrate contains the same number of calories as does one gram of fat.

T F 28. The vitamins you get in pill-form are the same as the vitamins you get in food.

T F 29. All fiber is alike.

T F 30. A diet low in cholesterol and fat can reduce the fatty deposits that clog arteries.

T F 31. The total amount of sugar contained in a product is listed on the label as either sugar or sucrose.

T F 32. Ascorbic acid used in cured meats, soft drinks, and cereals is dangerous to your health.

T F 33. The breakfast cereal Quaker 100% Natural contains less sugar than Cheerios.

T F 34. Watermelon may taste good, but it is not very nutritious.

T F. 35. American cheese is more nutritious than skim milk.

T F 36. When used as a sweetner or thickener, corn syrup is harmless.

T F 37. UnJike sugar, the amount of salt used in processed foods is usually within acceptable limits.

T F 38. Caffeine, which is present in coffee, tea, colas and chocolate, may cause birth defects.

T F 39. Glycerine, used in commerical candy, fudge and baked goods, is an unsafe additive.

T F 40. A half cup of fruit- flavored Jell-O is better for you than a whole piece of whole wheat bread.

T F 41. Apple juice is a highly nutritious drink.

42. Which fat in our diets is the primary heart-risk factor:
A. Saturated fat B. Unsaturated fat

43. Pill-form diet products help to lose weight in the form of water and:
A. muscle and bone tissue B. fat C. cellulite

44. A concentric or positive contraction in strength training should be held:
A. 2 seconds B. 4 seconds C. 6 seconds

45. The best way to lose weight is to:
A. exercise only B. diet only C. combine exercise and diet

46. The safest weight loss program is:
A. 1-2 pounds per week B. 4-6 pounds per week

47. To lose one pound of fat, you must exercise or cut calories. How many calories compose a pound:
A. 2700 B. 3500 C. 2100

48. _____ provides the primary source of building components for cells and tissue.
A. protein B. fat C. carbohydrate

49. The best way to lose weight permanently is to:
A.High-protein diet B. fat-free diet C. exercise

50. A psychological aversion to food where a person starves themself is called: A. Bulimia B. Anemia C. Anorexia Nervosa

APPENDIX D: EXERCISE PRESCRIPTION CONSENT FORM

HEALTH/FITNESS ASSESSMENT AND EXERCISE PRESCRIPTION

CONSENT FORM

The Health-Fitness Department provides opportunities for individuals to become aware of, achieve, and maintain health and fitness through a regular program of testing, analysis, and exercise prescription. The first phase of the program will be the identification of any exercise limitations through the completion of a Health/Fitness Questionnaire. Next a series of evaluations measuring a variety of physical parameters will be administered. All results will be used as a basis for establishing an individual training program.

TEST EVALUATION:

1. Resting Heart Rate
2. Resting and Post Exercise Blood Pressure
3. Vital Capacity Using a Dry Spirometer for Pulmonary Function
4. Body Fat Composition Using Skinfold Calipers
5. Flexibility of Various Body Joints
6. Strength Using a Hand Dynamometer and other Static and Dynamic Strength Test Batteries
7. Cardiac Risk Profile Questionnaire
8. A sub-maximal Cardiorespiratory Fitness Test utilizing a Bicycle Ergometer, and Step Test.

In signing this consent form you are indicating that you have read and understand the nature of this program. You futhermore state that you are entering this program of your own free will and that you may withdraw from the testing, training and course. Every effort will be made to insure your safe participation throughout the program. The initial testing will be followed by a training program which will include a variety of aerobic activities (walking, jogging, cycling, swimming, etc). All training activities will be planned to keep each student within his/her limitations as indicated on the Health/Fitness Questionnaire and as revealed on the test evaluations listed above.

Please indicate any medically related problems or other condition that should be considered in testing or in developing a personal fitness program. If any limitations are questionable,the individual may be required to provide a doctor's statement of consent prior to allowing strenuous activity. A medical clearance form is available from the instructor if necessary. If at any time during the program, in the instructor's judgement, there is a reason to request it, individuals may be required to secure a medical clearance to continue in the program. Any questions or doubts, please ask for further explanations.

I have read the above and understand the activities in which I will participate. FURTHER, I UNDERSTAND THAT PRIOR TO

BEGINNING ANY EXERCISE PROGRAM A PHYSICIAN'S CHECK UP IS ESSENTIAL. This physical examination should include a COMPLETE MEDICAL HISTORY and CARDIAC EVALUATION.

HEALTH/FITNESS ASSESSMENT AND EXERCISE PRESCRIPTION

Please complete the following information and return this form to the Exercise Instructor. Your participation in the program cannot be fully considered until this form is completed, signed and dated.

NAME _____
LAST FIRST MIDDLE

ADDRESS _____
STREET

_____
CITY STATE ZIP

HOME PHONE _____

In case of Emergency Please Notify:

_____
NAME PHONE RELATIONSHIP

PLEASE INITIAL BELOW THOSE THAT APPLY TO YOU:

_____ I wish to participate in the program outlined in the on the front of this form, and the information discussed with the Exercise Instructor.

_____ I wish to participate in the initial Assessment portion of the class, but have a medical problem which should be considered in the Exercise Prescription.

_____ I have read all of the above information (both sides) and understand the activities in which I will participate. All my questions about the program have been answered to my satisfaction.

In signing this consent form you are indicating that you have read and understand the nature of this program. You furthermore state that you are entering this program of your own free will and that you may withdraw from the testing, training and course.

_____
SIGNATURE OF STUDENT DATE

APPENDIX E: PHYSICIANS CONSENT FORM

HEALTH-FITNESS DEPARTMENT

PHYSICIANS CONSENT FORM

Dear Physician:

_____ has indicated, or tests revealed he/she possesses a condition which requires a physician's consent prior to any participation in strenous activity. The following information briefly describes the nature and contents of the Diagnostic Health-Fitness program in which your patient has enrolled.

The Diagnostic Health-Fitness course provides opportunities for individuals to become aware of, achieve, and maintain health and fitness through a regular program of testing, analysis, and exercise prescription. The first phase of the program will be the identification of any exercise limitations through the completion of a Health/Fitness Questionnaire. Next a series of evaluations measuring a variety of physical parameters will be administered. All results will be used as a basis for establishing an individual training program.

TEST EVALUATION:

1. Resting Heart Rate
2. Resting and Post Exercise Blood Pressure
3. Vital Capacity Using a Dry Spirometer for Pulmonary Function
4. Body Fat Composition Using Skinfold Calipers
5. Flexibility of Various Body Joints
6. Strength Using a Hand Dynamometer and other Static and Dynamic Strength Test Batteries
7. Cardiac Risk Profile Questionnaire
8. A Sub-maximal Cardiorespiratory Fitness Test utilizing a Bicycle Ergometer, and Step Test.

The initial testing will be followed by a training program which will include a variety of aerobic activities (walking, jogging, cycling, swimming, etc.). All training activities will be planned to keep each student within his/her respective limitations as indicated on the Health/Fitness Questionnaire and as revealed on the tests listed above.

We would appreciate your evaluation of the student's health status and any recommendations you can make concerning the safe limits of physical activity in which the above student can participate.

Thank You for your cooperation.

Please complete information requested on the reverse side.

PHYSICALLY RELATED CONDITION RESTRICTING PARTICIPATION:

_____

_____

PHYSICIAN'S PHYSICAL ACTIVITY RECOMMENDATIONS:

_____

_____

PLEASE CHECK ONE:

_____Student should not engage in strenuous physical activity.

_____Student can participate in a modified program as indicated.

_____Student can participate without restriction.

_____ DATE_____

PHYSICIAN SIGNATURE

APPENDIX F: PHYSICAL FITNESS EVALUATION

HEALTH-FITNESS DEPARTMENT

FITNESS EVALUATION

NAME_____ AGE_____ HEIGHT_____ WEIGHT_____

TESTING DATES:		
RESTING H/R	BPM	BPM
RESTING B/P	/	/
FLEXIBILITY:		
TRUNK FLEXION	inches	inches
SHOULDER JOINT	inches	inches
TRUNK EXTENSION	inches	inches
VITAL CAPACITY:	cc	cc
STRENGTH:		
UPPER EXTREMITY		Bench Pres
LOWER EXTREMITY		Leg Press
TRUNK/LOWER EXTREMITY		Sit Ups
HAND DYNAMOMETER	L R	L R Grip
LEG		Leg
ARMS, SHOULDER, CHEST		Push Ups

BODY COMPOSITION:			
CHEST	M		
THIGH	M/F		
ILIUM	M/F		
ABDOMEN	M/F		
TRICEP	M/F		
SCAPULA	M/F		
	TOTAL		
BODY FAT %		%	%
FAT WEIGHT		lbs.	lbs.
LEAN WEIGHT		lbs.	lbs.
TARGET WEIGHT		lbs.	lbs.

AEROBIC TEST:		
STEP TEST	1 Min. BPM	1 Min. BPM
SUB-MAXIMAL BIKE TEST	ml/kg	ml/kg
MAXIMUM HEART RATE		

SUBMAXIMAL BICYCLE TEST:

AGE_____ WEIGHT_____ lbs._____ kg. _____ lbs. _____ kg.
Test 1 Test 2

PREDICTED MAX HEART RATE_____

SEAT HEIGHT_____

			TEST I		TEST II	
TAGE	RPM	WORKLOAD	HR	BP	HR	BP
1	50	kgm		/		/
2	50	kgm		/		/
3	50	kgm		/		/
OVERY	I.P.E.					
	1 Min.					
	2 Min.					
	3.Min.					
	4 Min.					
	5 Min.					
AXIMUM WORKLOAD						
AXIMUM O_2 (L/min.)						
AXIMUM O_2 (ml/kg)						
XERCISE-TARGET HEART RATE:			70%		70%	
			85%		85%	
RAINING HEART RATE:						

DIAGNOSTIC HEALTH FITNESS

BODY DIMENSIONS:

TESTING DATES:	_____	_____
WAIST:	_____ Inches	_____ Inches
BUST:	_____ Inches	_____ Inches
HIPS:	_____ Inches	_____ Inches
THIGHS:	R _____ /L _____ Inches	R _____ /L _____ Inches
CALF:	R _____ /L _____ Inches	R _____ /L _____ Inches

R: Right
L: Left

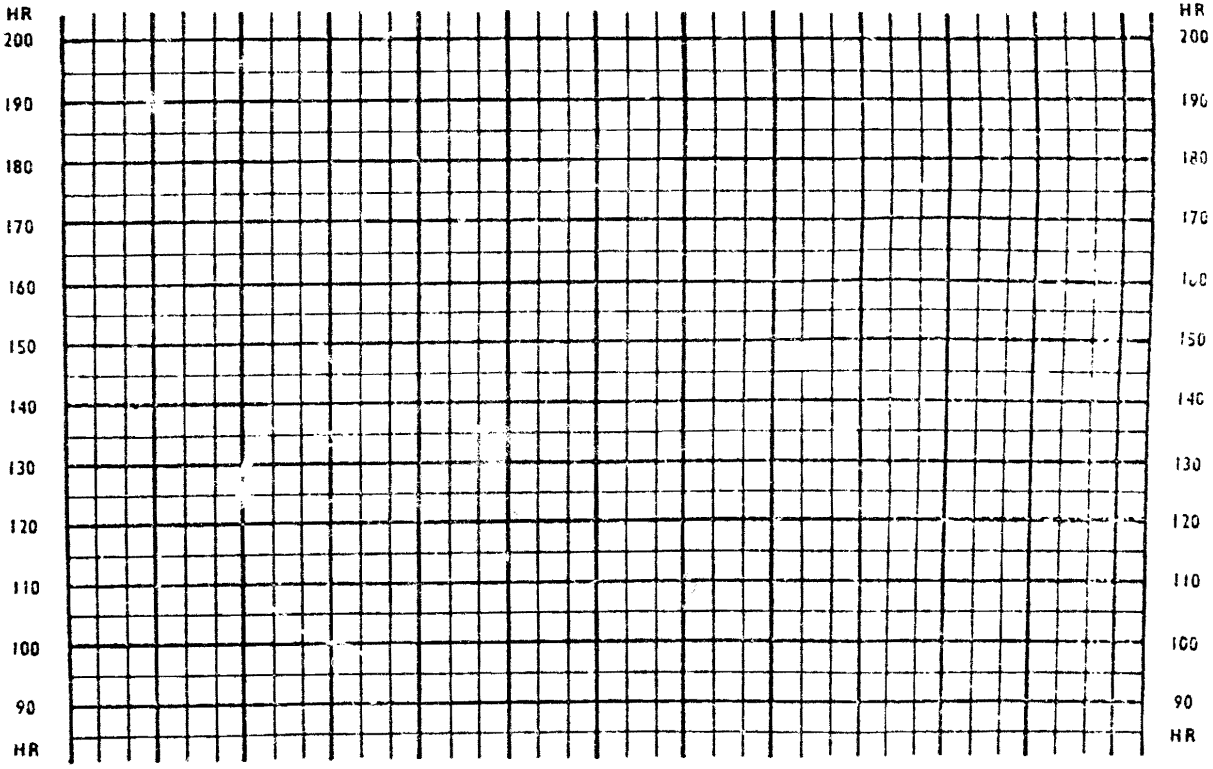
NAME _____

NAME _____ AGE _____ WEIGHT _____ LB _____ KG

	DATE	2nd LOAD HR	3rd LOAD HR	MAX WORKLOAD	MAX O_2 (L/min)	MAX O_2 (ml/kg)
Test 1		/	/			
Test 2		/	/			
Test 3		/	/			

DIRECTIONS

1. Plot the HR of the 2nd and 3rd loads versus the work (kgm'/min)
2. Determine the subject's max HR line by subtracting subject's age from 220.
3. Draw a line through both points and extend to the max HR line for age.
4. Drop a line from this point to the baseline and read the max O_2 uptake.



WORKLOAD (kgm/min)	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100
MAX O_2 UPTAKE (L/m)	0.9	1.2	1.5	1.8	2.1	2.4	2.8	3.2	3.5	3.8	4.2	4.6	5.0
KCAL USED (Kcal/m)	4.5	6.0	7.5	9.0	10.5	12.0	14.0	16.0	17.5	19.0	21.0	23.0	25.0

APPENDIX G: CARDIOVASCULAR DISEASE RISK FACTOR PROFILE

CARDIOVASCULAR DISEASE RISK FACTOR PROFILE

Certain "risk factors" have been identified, which seem to predispose an individual to, or at least are associated with, the development of CORONARY HEART DISEASE.

RISK FACTOR	1 VERY LOW	2 LOW	3 MODERATE	5 HIGH	7 VERY HIGH	POINTS
1. BLOOD PRESSURE (mmHg)						
_____Systolic	<110	120	130-140	150-160	170>	_____
_____Diastolic	<70	76	82-88	94-100	106>	_____
2. CIGARETTES	Never-None in 1 Year	5	10-20	30-40	50>	_____
3. BODY FAT %						
Women _____	<15	20	25	33	40 >	_____
Men _____	<12	16	22	25	30 >	_____
4. TENSION & STRESS	Almost Never	Occa-sional	Freq-uent	Nearly Always	Constant	_____
5. FAMILY HISTORY *Premature Heart Attack (60 yrs. old)	0	1	2	3	4>	_____
6. AGE	<30	35	40	50	60>	_____
7. PHYSICAL ACTIVITY Minutes per week	240	180-120	100	80-60	<30	_____
8. CARDIOVASCULAR FITNESS	Step/Bike	S/B	S/B	S/B	S/B	
Men_____	81/55	98/45	103/36	134/30	138/25	_____
Women_____	79/55	94/43	125/39	129/26	145/20	_____
9. CHOLESTEROL	<180	200	220-240	260-280	300>	_____
10. HDL RATIO Men		3.43	4.97	9.55	13.39 >	_____
_____ Women		3.27	4.44	7.05	11.04>	_____
11. TRIGLYCERIDES _____ (mm/100cc)	<80	100	150	200	300>	_____
12. GLUCOSE (mgl 100cc)	<80	90	100-110	120-130	140>	_____
				TOTAL SCORE		_____

Your scores are most important to you as an individual because:
(1) it helps identify the individual factors which increase your risk and which you may be able to modify to reduce your risk,
(2) allows you to follow trends in certain risk factors by comparison of your present levels with your previous and/or subsequent data.

IF YOU SCORE:

12-24 = BELOW AVERAGE RISK
25-40 = AVERAGE RISK
41-60 = ABOVE AVERAGE RISK
61-84 = HIGH RISK

APPENDIX H: EXERCISE PRESCRIPTION FORM

EXERCISE PRESCRIPTION

NAME_____ AGE_____

HEIGHT_____ WEIGHT_____ MAXIMUM HEART RATE_____

SPECIAL CONSIDERATIONS:_____

_____

COMPONENTS OF EXERCISE SESSION: PURPOSE/TIME/INTENSITY

A) WARM-UP / /

B) STIMULUS / /

C) COOL-DOWN / /

WORK VARIABLES:

A) MODE

B) FREQUENCY x/wk

C) DURATION: Initial Stage Progressive Stage Maintainence Stage

MINUTES / /

D) INTENSITY:

% HEART RATE / /

PROGRESS CHART: INITIAL STAGE:

WK	TL DIS.	TL TIME	%HR	INT DIS.	INT TIME	MN REST	REPS.

PROGRESSIVE STAGE :

APPENDIX I: WARM-UP AND COOL-DOWN ACTIVITIES

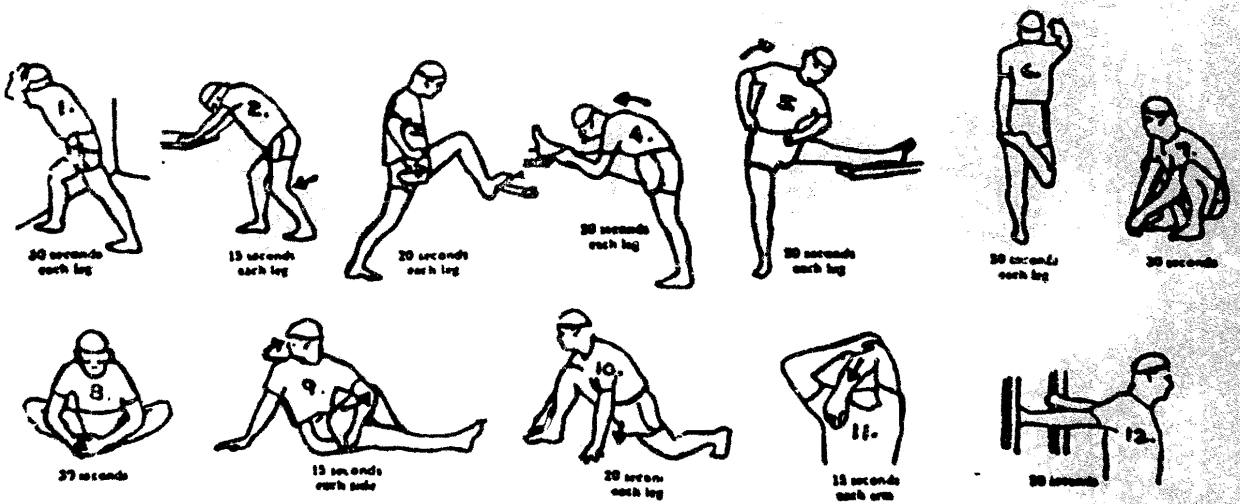
WARM-UP AND COOL-DOWN ACTIVITIES

STRETCHING IS AN IMPORTANT INJURY PREVENTIVE FACTOR. REGULAR AND PROPER STRETCHING CAN MAKE YOU LESS PRONE TO INJURIES. FOLLOW THE GUIDELINES LISTED BELOW:

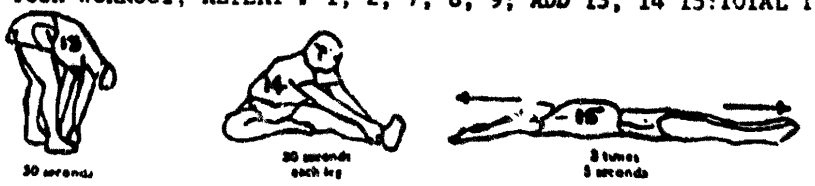
S T R E T C H B U T D O N ' T O V E R S T R E T C H !!!

1. STATIC STRETCH - DON'T BOUNCE
2. BEGIN STRETCH GRADUALLY, EASILY, CONTROLLED
3. RELAX INTO THE STRETCH, DON'T HOLD YOUR BREATH
4. COME OUT OF EACH STRETCH THE SAME WAY YOU ENTERED IT
5. LEARN TO ENJOY STRETCHING, IT SHOULD NOT BE PAINFUL!
6. STRETCH BEFORE AND AFTER PROGRAM

BEFORE BEGINNING YOUR WORKOUT, FOLLOW DIAGRAMS 1-12: TOTAL TIME: 8½ MINUTES



AFTER COMPLETING YOUR WORKOUT, REPEAT # 1, 2, 7, 8, 9; ADD 13, 14 15:TOTAL TIME 6½MINUTES



APPENDIX J: EXERCISE LOG

EXERCISE LOG

Name_____ Activity_____

DATE	TIME	INTENSITY	PRE-EXERCISE H.R.	PEAK HEART RATE	COOL-DOWN H.R.	DIST

TRAINING ZONE HEART RATE_____ J_____

APPENDIX K: NAUTILUS TRAINING PRINCIPLES

Nautilus Training Principles

General procedures to be followed on all machines where the "normal" (positive-negative) movements are performed:

1. Make certain that the rotational axis of the cam of all rotary exercises is in-line with the joint axis of the body part that is being moved.

2. Position your body in a straightly aligned manner. Avoid twisting or shifting your weight during the movement.

3. Maintain a loose, comfortable grip. Never squeeze the handgrips tightly as this results in elevated blood pressure.

4. Lift resistance or perform positive work to the count of two . . . pause . . . lower the resistance or perform negative work slowly and smoothly while counting to four.

5. Use as much of your range of motion as possible on each machine to develop full-range strength and flexibility.

6. Breathe normally. Try not to hold your breath while training.

7. Perform each exercise for 8 to 12 repetitions:

   a. Begin with a weight you can comfortably do 8 times.
   b. Stay with that weight until you can perform 12 strict repetitions. On the following workout, increase the weight by approximately 5% which should result in your inability to perform more repetitions than the minimum guideline dictates.
   c. Try to progress in repetitions and/or resistance in each successive workout.

8. Move quickly from machine to machine. The longer the rest between machines, the less effective the cardiovascular conditioning.

9. Follow your routine as the exercises are numbered on your workout sheet; however, any time the machine you are to do next is being used, go to another exercise and then return to the machine that was in use.

10. Move very quickly — in less than 3 seconds — from the primary exercise to the secondary exercise in all double Nautilus machines.

11. Include a maximum of 12 exercises, 4 to 6 for the lower body and 6 to 8 for the upper body.

12. Exercise the larger muscle groups first and proceed down to the smaller muscle groups. Example: hips, thighs, back, shoulders, chest, arms, and neck.

13. Finish your entire workout in 20 to 30 minutes.

14. Rest a minimum of 48 hours and not more than 96 hours between successive workouts.

APPENDIX L: NAUTILUS GYM POLICIES

Nautilus Gym Policies

1. Dress:

   Shirts, shorts and gym shoes must be worn at all times.
   Jeans may not be worn.
   Jewelry, metal or decorative objects (buckles, sharp plastic objects, rings, etc.) may not be worn.

2. No food, drinks, smoking or individual radios are permitted.

3. Loitering is strictly prohibited-only those persons enrolled in and participating in a workout may remain in room.

4. Workouts will be by schedule or appointment-either class or as arranged by facilitator.

5. The facilitator and/or an instructor must be present at all times.

6. After learning exercise procedures, strict adherence will be enforced.

7. All participants must bring a towel and wipe clean the padding after using.

8. Procedures:

   A. Initial entering for workout

      1. Present schedule, printout or other authorization to facilitator or instructor.
      2. Establish days and time for workout.
      3. Sign and return Release Form.
      4. Record preliminary information on Record Card.

   B. Subsequent workouts

      1. Withdraw Record Card from file.
      2. Stretch and loosen up-be ready to start on schedule.
      3. Record weight (setting by number) from machine.
      4. Immediately after completion of an exercise, record actual number of repetitions.
      5. At end of work, be certain that all workout data is recorded on the Record Card including date and initial

   C. Machine

      1. Adjust seats to proper heights-CAMS on level with joints involved in the muscle action. (check in mirro
      2. Fasten belts as instructed.
      3. Watch action in mirrors for proper execution.

4. Do Not let weights drop. A part of the exercise value is negated by loss of negative resistance when this occurs.
5. Place seat straps together on the seat when finished with machine. DO NOT LET THE VELCRO FALL TO THE CARPET.
6. Clean all pads with your towel before leaving a machine. THIS IS A MUST.

9. Unbecoming behavior and/or foul language will not be tolerated.

10. Anyone violating or abusing this facility or the policies and procedures will lose his/her privilege of using it.

APPENDIX M: LIABILITY RELEASE

LIABILITY RELEASE

In consideration for the use of the College Nautilus Facility, I_____, hereby agree to assume full responsibility for any physical injury I may incur as a result of said usage.

I further agree to hold the College and the State of Florida harmless from any liability incurred by the waiver of sovereign immunity in Chapter 75-313 and Chapter 74-235 of the Florida Statutes.

I have read and understand the policies and procedures regarding the use of the Nautilus Facility and agree to abide by them.

_____
Signature

_____
Date

WITNESSES:

_____

_____

APPENDIX N: NAUTILUS TRAINING CARD

NAUTILUS TRAINING CARD

Date / EXERCISE	
Low Back	
Leg Extension	
Duosquat Seat# ____	
Leg Curl	
Abductor/ Adductor	
Multi Exercise	
Abdominal Seat# ____	
Rotary Torso	
Super Pullover Seat#	
Double Chest Cross Chest Seat#	
Double Chest Decline Pr. Seat#	
Lateral Raise Seat#	
Overhead Press Seat#	
Neck and Shoulder	
Multi Curl Seat#	
Multi Tricept Seat#	
Bicycle Res (Optional) Seat# Dis.	
Weight	
Pulse	

APPENDIX O: DAILY CALORIC INTAKE FORM

Worksheet For Cauculating Daily Caloric Intake

Daily Food Intake Log:

Time	Food Eaten	Amount	No. of Calories	How Cooked	Meal or Snack	Hunger Level (0-3)	Date: When Eating Activity/Location	(1-3) Mood
0								

APPENDIX P: COURSE EVALUATION

DIAGNOSTIC HEALTH FITNESS

COURSE EVALUATION

I. Class scheduling: Days of the week and times

II. Material Presented: Generally Informative Too Basic Too Detailed
Need to Cover other Topics Confusing (circle your choice)
Comments

III. Exercise Sessions: Too Long Too Short Just Right Not-
Enough Variety of Activities Enough Variety (circle your choices)
Comments

IV. Strength Training Sessions: Should be Required Optional
Scheduled during Classtime Scheduled outside of Classtime
Appropriate instruction Given Not enough instruction Given
Comments

V. Instructor: Well Informed Generally Informed Confused
Presents material Well Seems Disorganized Needs to change-
Method of Presentation (circle your choices)
Comments

VI. Textbook: Very Good Moderately Helpfull A Waste of Time
(circle your choice)
Comments

[illegible] for the course for the future: