

North Hennepin Community College

EXSC 2010: Essentials of Exercise Science

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 0

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:

This course requires either of these prerequisite categories

1. Both of these groups

1. Any one of these four

Reading College Level

Reading at College Level

ADEV 0952 - College Reading and Learning Strategies II (Minimum grade: 1.67 GPA

Equivalent)

ADEV 1950 - Reading Texts Critically

And

2. Any one of these four

Writing College Level

Placement into ENGL 1201

ENGL 0950 - Preparation for College Writing II (Minimum grade: 1.67 GPA Equivalent)

ENGL 0990 - Gateway Composition

Or

2. All of these four groups

1. Any one of these six

Placement into EAP 1230

Reading at College Level

EAP 0930 - Academic Reading and Study Skills (Minimum grade: 1.67 GPA Equivalent)

ESOL 0930 - Academic Reading and Study Skills

EAP 1230 - College Reading and Studying Skills

ESOL 1230 - College Reading and Studying Skills

And

2. Any one of these three

Sentence Meaning at College Level

EAP 0900 - College Vocabulary Development

ESOL 0900 - College Vocabulary Development

And

3. Any one of these four

Placement into EAP 1280

EAP 0980 - Academic Listening and Speaking (Minimum grade: 1.67 GPA Equivalent)

ESOL 0980 - Academic Listening and Speaking

EAP 1280 - Listening and Speaking for College Success

And

4. Any one of these seven

Placement into EAP 1260

Placement into ENGL 1201

EAP 0960 - Academic Writing Skills Development (Minimum grade: 1.67 GPA Equivalent)

ESOL 0960 - Academic Writing Skills Development

EAP 1260 - College Writing Skills Development (Minimum grade: 1.67 GPA Equivalent)

ESOL 1260 - College Writing Skills Development

ENGL 0990 - Gateway Composition

Corequisites: None

MnTC Goals: None

This course provides an in-depth look into topics such as the acute and chronic physiological and psychological responses to exercise, exercise anatomy, exercise metabolism, and how the nervous, skeletal, muscular and endocrine systems respond during exercise. (3 hours lecture)

Prerequisite: Placement into Engl 1201

It is strongly recommended that students in the Personal Training Certificate program take EXSC 2010 and EXSC 2100 at the same time in order to sit for the NASM-CPT exam.

B. COURSE EFFECTIVE DATES: 12/15/2015 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Academic Content could include, but is not limited to: the kinetic chain, functional anatomy, homeostasis balance, fitness principles of training, muscle and exercise physiology, neuromuscular recruitment pattern of musculo-skeletal system, bioenergetics, resting and exercise metabolism, hormonal responses to exercise, cardiovascular functioning including both acute and chronic responses to exercise, pulmonary function and gas Exchange, and physiology of training.

D. LEARNING OUTCOMES (General)

1. Define the components of the human movement system (kinetic chain).
Personal Training Certificate Goals: 1, 2a,2b,2d,2e, and 4
Wellness Coaching Certificate Goals:1, 2a,2b,2d,2e, and 4
A.S. in Corporate Wellness Goals: 1, 2a,2b,2d,2e, and 4
NHCC ELOs: 1, 2, and 4
2. Explain the basic structure and function of the nervous, skeletal, muscular, and endocrine systems, and how these systems respond and adapt to exercise.
Personal Training Certificate Goals: 1, 2a,2b,2d,2e, 3d and 4
Wellness Coaching Certificate Goals:1, 2a,2b,2d,2e, 3d and 4
A.S. in Corporate Wellness Goals: 1, 2a,2b,2d,2e, 3d and 4
NHCC ELOs: 1, 2, 3 and 4
3. Describe the structure and function of the cardiovascular and respiratory systems, and explain how each of these systems relates to human movement.
Personal Training Certificate Goals: 1, 2a,2b,2d,2e,3c, 3d and 4
Wellness Coaching Certificate Goals:1, 2a,2b,2d,2e,3c, 3d and 4
A.S. in Corporate Wellness Goals: 1, 2a,2b,2d,2e,3c, 3d and 4
NHCC ELOs: 1, 2, 3 and 4
4. Describe the primary methods of how the body produces energy for exercise (exercise metabolism and bioenergetics).
Personal Training Certificate Goals: 1, 2a,2b,2d,2e,3c,3d and 4
Wellness Coaching Certificate Goals:1, 2a,2b,2d,2e,3c,3d and 4
A.S. in Corporate Wellness Goals: 1, 2a,2b,2d,2e,3c,3d and 4
NHCC ELOs: 1, 2, 3 and 4

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

1. Knowledge of Human Cultures and the Physical and Natural World: Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills - Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.
3. Personal and Social Responsibility and Engagement - Including: Civic knowledge and involvement; campus, local and global; Intercultural knowledge and competence; Ethical reasoning and action; Foundations and skills for lifelong learning.
4. Integrative and Applied Learning - Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community.