

Program: Exercise Science

Program Coordinator: Roy Mulholland

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Program Mission Statement: The Exercise Science program strives to prepare students for physical activity, exercise, health and sport related professions through the obtainment of knowledge, skills and abilities related to health and wellness.

Program/Major Objectives: *Qualities and competencies expected in graduates from this program/major*

At the close of their degree students should be able to:

1. Demonstrate an understanding of functional anatomy and biomechanics of the human body.
2. Assess health status, conduct fitness testing, and based on assessed need, design, implement and administer exercise programs. Demonstrating an understanding of the physiological basis for exercise and physical activity.
3. Demonstrate an understanding of the principles of nutrition and the role of diet and exercise on body composition and weight control.
4. Recognize critical issues in the field of Exercise Science and produce potential solutions. Demonstrate an understanding of how these issues can be impacted by gender, physical adaptations and cultural differences.
5. Integrate Christian thought into the field of exercise science.

Student Learning Outcomes	Program Objective Number	Course Number	Course Objective Number	Assignment in Course	Assessment Method	Level of Mastery expected in this course
1. Seek Truth Through Critical Inquiry and Research						
1.1 Practice critical self-awareness	4	EXSC 101	1	Complete personal DiSC profile	DiSC Test Numeric	Introduce
1.2 Understand our world and comprehend quantitative and conceptual relationships	1	EXSC 311	3	Kinematic Motion Quiz Ch. 2 Kinetic Motion Quiz Ch. 3	Numeric – 70%	Develop
1.3 Think integratively to solve problems	1	PHED 335	2	Knee/Ankle Injury Evaluation Lab	Rubric – 70%	Develop
	4	EXSC 315	3	Pre and Post Case Study	Numeric – 70%	Pre – Intro Post - Devel
1.4 Apply skills and systematic reasoning	1	EXSC 311	2	Biomechanical Analysis Functional Lab	Numeric – 70%	Develop
	4	EXSC 405	1	Secure and Participate in Internship	Supervisor Evaluation	Mastery
2. Collaborate and Communicate						
2.1 Communicate and Cooperate	2	EXSC 250	5	Client Assessment Assignment	Numeric – 70%	Develop
2.2 Value others	2	PHED 335	1	CPR Certification	Pass National Test	Mastery
	3	BIOL 105	2	Nutritional Analysis	Numeric – 70%	Develop
3. Engage Culture and Be Creative						
3.1 Demonstrate cultural awareness	4	PHED 356	4	Adapted Sports Olympics Written Response Paper	Numeric – 70%	Develop
3.2 Demonstrate creativity and appreciation for arts, beauty, and ideas						

4. Demonstrate Faith and Learning in Action						
4.1 Recognize worldviews	5	EXSC 101	1	Integratin of Faith Paper	Numeric – 70%	Introduce
4.2 Apply Christian values	5	PHED 410	3	Group Project Oral Presentatoin	Rubric – 70%	Mastery
4.3 Respond to God	5	PHED 101	1	Spirituality Paper	Numeric – 70%	Introduce
4.4 Maintain healthy self-regard and a growth-focused lifestyle	4	EXSC 250	1	Fitness Self Analysis	Numeric – 70%	Develop

Department of Sport and Kinesiology; Exercise Science Program

Learning Goals and Objectives: Expanded Details

Program Objectives: The Exercise Science program will prepare students to:

1. Demonstrate an understanding of functional anatomy and biomechanics of the human body.

Students will be able to:

- 1.1 Explain the knowledge of the structure of the human body and locate anatomic landmarks.
- 1.2 Describe movements for major joints of the body and analyze the movement patterns and muscles involved in performing various activities.
- 1.3 Discuss various locomotors and sport-related activities with regard to the biomechanical principles that explain the kinematics and kinetics of motion.

2. Assess health status, conduct fitness testing, and based on assessed need, design, implement and administer exercise programs. Demonstrating an understanding of the physiological basis for exercise and physical activity.

Students will be able to:

- 2.1 Explain the metabolic processes responsible for generation of ATP and the relationship among the anaerobic and aerobic systems.
- 2.2 Articulate the metabolic and cardio respiratory responses and adaptations to training.
- 2.3 Describe their understanding of the neuromuscular responses and adaptations to training, and describe the impact of the neuromuscular system on human performance.
- 2.4 Demonstrate the different methods for assessing health status of clients and evaluate the results for exercise assessment and programming.
- 2.5 Interpret information from fitness assessment and evaluate the results to develop an appropriate exercise recommendation.

3. Demonstrate an understanding of the principles of nutrition and the role of diet and exercise on body composition and weight control.

Students will be able to:

- 3.1 Explain the effects of body composition on health and athletic performance.
- 3.2 Discuss the role of diet and exercise in determining body composition.
- 3.3 Perform nutritional assessment via analysis of dietary intake, basal metabolic rate, energy expenditure, and body composition; interpret the results with specific attention to weight control and nutritional health.
- 3.4 Interpret appropriate nutritional guidelines related to physical activity and alterations in body composition, and apply the principles to various groups within the population.

4. Recognize critical issues in the field of Exercise Science and produce potential solutions. Demonstrate an understanding of how these issues can be impacted by gender, physical adaptations and cultural differences.

Students will be able to:

- 4.1 Identify current issues in the field of Exercise Science.
- 4.2 Be able to articulate the latest trends related to exercise and wellness.
- 4.3 Propose potential solutions for critical issues related to wellness, physical fitness and nutrition.
- 4.4 Describe necessary adaptations based on gender, physical adaptations, and cultural differences.

5. Integrate Christian thought into the field of Exercise Science.

Students will be able to:

- 5.1 Discuss how scripture informs us about health and wellness and the physical nature of our body.
- 5.2 Be physically prepared to answer God's call on their lives.