

**Course Information****Course Number/Section****BIOL 3370, section 001****Course Title****Exercise Physiology****Term****Spring 2010****Days and Times****Monday, Wednesday, SOM 2.901****Professor's Contact Information****Professor****Irina Borovkov****Office phone****972 883-6895****e-mail:**[irina.borovkov@utdallas.edu](mailto:irina.borovkov@utdallas.edu)**Office location**[FN 3.208](#)**Office hours****by appointment****Course Pre-requisites****Pre-requisite: BIOL2312, Introduction to Modern Biology****Course Description**

BIOL3370 Exercise Physiology (3 semester hours).

Examines the operation and adaptation of human organ systems (cardiovascular, respiratory, skeletal and hormonal) during exercise. Clinical aspects of exercise, including the effects of training, nutrition, performance and ergogenic aids, are also discussed.

Pre-requisite: BIOL2312

Recommended: BIOL3455 Human Anatomy and Physiology

BIOL3456 Human Anatomy and Physiology with Lab II

**Student learning Objectives/Outcomes**

1. The student will learn the basic mechanisms of the physiology of the organ systems of the human body.
2. The student will learn the adaptations of the physiological mechanisms of the organ systems involved in the support of human exercise
3. The student will be expected to communicate this learning through examinations that include written essay answers to the questions related to the objectives above

**Required Textbooks and Materials****Exercise Physiology**, Powers, Scott, Howley, Edward. 7<sup>th</sup> edition, McGraw Hill, 2009**ISBN-13:978-0-07-337647-9****ISBN-10:0-07-337647-7**

### Lecture schedule

	Date	Topic	Chapters
<b>Jan</b>	<b>11</b>	<b>Introduction</b>	
	<b>13</b>	Bioenergetics	<b>3</b>
	<b>18</b>	Holiday	
	<b>20</b>	Exercise Metabolism	<b>4</b>
	<b>25</b>	Hormonal Response to Exercise	<b>5</b>
	<b>27</b>	Hormonal Response to Exercise	<b>5</b>
<b>Feb</b>	<b>1</b>	Catch-up or review	
	<b>3</b>	<b>Exam I</b>	<b>3-5</b>
	<b>8</b>	Skeletal Muscle: Structure and Function	<b>8</b>
	<b>10</b>	Skeletal Muscle: Structure and Function	<b>8</b>
	<b>15</b>	Circulatory Adaptations to Exercise	<b>9</b>
	<b>17</b>	Circulatory Adaptations to Exercise	<b>9</b>
	<b>22</b>	Respiration during Exercise	<b>10</b>
	<b>24</b>	Respiration during Exercise	<b>10</b>
<b>Mar</b>	<b>1</b>	Acid-Base Balance	<b>11</b>
	<b>3</b>	Tai-Chi Bioenergetics or presentations	
	<b>8</b>	<b>Exam II</b>	<b>8-11</b>
	<b>10</b>	Temperature Regulation	<b>12</b>
	<b>15</b>	Spring break	
	<b>17</b>	Spring break	
	<b>22</b>	Physiology of Training	<b>13</b>
	<b>24</b>	Physiology of Training	<b>13</b>
	<b>29</b>	Work Tests	<b>15</b>
	<b>31</b>	Exercise Prescriptions	<b>16</b>
<b>Apr</b>	<b>5</b>	Factors affecting Performance	<b>19</b>
	<b>7</b>	Work Tests Evaluating Performance	<b>20</b>
	<b>12</b>	<b>Exam III</b>	<b>13, 15, 16, 19</b>
	<b>14</b>	Work Tests Evaluating Performance	<b>20</b>
	<b>19</b>	Training for Performance	<b>21</b>
	<b>21</b>	Nutrition	<b>23</b>
	<b>26</b>	Exercise and Environment	<b>24</b>
	<b>28</b>	Ergogenic aides	<b>25</b>
<b>May</b>	<b>3</b>	<b>Final exam</b>	<b>20, 21, 23-25</b>

The schedule is subject to change