Course Specifications

Course Title:	**Exercise Physiology**
Course Code:	**372318-2**
Program:	**Bachelor of Physical Therapy Program (372000)**
Department:	**Department of Physical Therapy**
College:	**College of Applied Medical Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours:	2 (Theoretical)
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered	8th level/3rd year
4. Pre-requisites for this course (if any)**:**	Physiology for Physical Therapy (372111-4)
5. Co-requisites for this course (if any)**:**	N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	3 hours/week (30 hours/semester)	100%
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	30
2	**Laboratory/Studio**	-
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	30
Other Learning Hours*		
1	**Study**	40
2	**Assignments**	10
3	**Library**	6
4	**Projects/Research Essays/Theses**	-
5	**Others**(specify)	-
	Total	56

***The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

Exercise physiology is an evaluation of the acute responses and some chronic adaptations of the body to exercise and how energy can be generated, stored, and transferred. In addition to what are the precautions of exercise in special situation such as excess heat or cold or high altitudes.

2. Course Main Objective

The main objective of this course is to provide:

1. Knowledge of the acute and chronic physiological changes in body systems that occur in the body in response to exercise stress.
2. Knowledge in the performance, understanding and interpretation of basic physiological assessment such as maximum oxygen uptake, muscular fitness and cardiovascular analyses.
3. An appreciation of research in exercise physiology.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	Recognize the structure, functions of exercising muscle and types of muscle contraction, changes in muscle metabolism during exercise.	K1
1.2	State endocrine response of body, cardiovascular & respiratory adaptation during exercise.	K1
1.3	Describe various body responses and adaptation during different exercise situations.	K3
2	**Skills:**	
2.1	Differentiate between body performance during aerobic and anaerobic states of exercise.	S1
2.2	Summarize mechanism of muscle contraction and disorders of neuro-muscular junction.	S2
2.3	Develop critical thinking and problem-solving skills.	S4
3	**Competence:**	
3.1	Use self-learning to increase the body of knowledge and promote skills.	C3
3.2	Research a library, and internet as a source of knowledge to prepare and introduce assignments and evidence-based practice.	C5

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to Exercise Physiology Sports and exercise physiology Section A – Fundamentals of exercise physiology, p 1-7 Section B – Bioenergetics for movement, p 11-32	3
2	Structure and function of exercising muscle Sports and exercise physiology Section C – Skeletal muscle contraction and control, p 35-52	3
3	The neuro-muscular junction and mechanism of muscle contraction - Sports and exercise physiology, Section C – Skeletal muscle contraction and control, p 35-52	3

	- Exercise physiology theory &application to fitness &performance. Chapter 8 Skeletal Muscle: Structure and Function p,166-187	
4	Muscle Metabolism – Aerobic and Anaerobic Exercise - Exercise physiology theory &application to fitness &performance. Chapter 4 Exercise Metabolism p, 68-84 - Sports and exercise physiology, Section B – Bioenergetics for movement p,11-32	3
5	Neural control of muscle contraction Sports and exercise physiology Section C – Skeletal muscle contraction and control, p 35-52	3
6	Hemodynamic of Blood Flow – Regulation of blood flow Exercise physiology theory &application to fitness &performance. Chapter 9 Circulatory Responses to Exercise 193-215	3
7	Cardio- respiratory Adaptation to Training - Exercise physiology theory &application to fitness &performance. Chapter 10 Respiration during Exercise 224 Sports and exercise physiology Section D – Pulmonary adaptations to exercise Section E – Cardiovascular adaptations to exercise, p 75-91	3
8	Hormonal responses during exercise - Exercise physiology theory &application to fitness &performance. Chapter 5 Cell Signaling and the Hormonal Responses to Exercise p,92-120	3
9	Exercise at High Altitude - Exercise physiology theory &application to fitness &performance. Chapter 24 Exercise and the Environment p, 548-554.	3
10	Exercise in hot and cold Environment - Exercise physiology theory &application to fitness &performance. Chapter 24 Exercise and the Environment p, 557-560.	3
Total		30

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Recognize the structure, functions of exercising muscle and types of muscle contraction, changes in muscle metabolism during exercise.	Lecturing	Written exams Quiz
1.2	State endocrine response of body during exercise and cardiovascular & respiratory adaptation during exercise.		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.3	Describe various body responses adaptation during different exercise situations.		
2.0	**Skills**		
2.1	Differentiate between body performance during aerobic and anaerobic states of exercise.	Lecturing Discussion	Written exams Assignment Quiz
2.2	Summarize mechanism of muscle contraction and disorders of neuro-muscular junction.		
2.3	Develop critical thinking and problem-solving skills.		
3.0	**Competence**		
3.1	Use self-learning to increase the body of knowledge and promote skills.	Presentation Discussion	Assignment
3.2	Research a library, and internet as a source of knowledge to prepare and introduce assignments and evidence-based practice.		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-term written exam	5th	30%
2	Presentation and/or assignment/Quiz	8th	30%
3	Final written exam	12th or 13th	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

Course instructors are available for individual consultation at times when they are not engaged in lectures and other administrative duties. Times available for appointment are posted on the door of the Instructor's office (6 hours weekly). Course instructor's provides a range of academic and course management advice range from course planning and subject enrolment to deal with appeals and progression issues.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- Exercise physiology theory &application to fitness &performance. 10th edition , ISBN 978-1-259-87045-3

	- Sports and Exercise Physiology ,B.D. Hames, School of Biochemistry and Molecular Biology, University of Leeds, Leeds, UK,2nd edition - ACSM's Advanced Exercise Physiology Author(s): American College of Sports Medicine.;Caiozzo, Vincent;Farrell, Peter A.;Joyner, Michael Jو Publisher: Wolters Kluwer Health;Lippincott Williams & Wilkins, Year: 2012و ISBN: 9780781797801,0781797802
Essential References Materials	- Journal of Exercise Physiology-online. - International Journal of Applied Exercise Physiology. - Exercise Physiology: Theory and Application to Fitness and Performance by Scott Powers and Edward Howley (Nov22, 2011). - American Association of Cardiovascular and Pulmonary Rehabilitation.
Electronic Materials	- Link for the course at Blackboard Learn Portal on Taif university webpage (https://lms.tu.edu.sa/webapps/login/) - Exercise and Physical Fitness (NIH)
Other Learning Materials	N/A

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Classroom
Technology Resources (AV, data show, Smart Board, software, etc.)	- Data show - Internet access
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment strategies	Students	**Indirect** (Course evaluation survey and focus group discussion "small group of students").
Extent of achievement of course learning outcomes	Staff member.	**Direct** (Exams)
Quality of learning resources	Students and Staff members.	**Indirect** (Questionnaires).

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods(Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department council
Reference No.	Meeting No.9
Date	18/5/2022

Course Specifications

Course Title:	**Neuroanatomy**
Course Code:	**372329-2**
Program:	**Bachelor of Physical Therapy Program (372000)**
Department:	**Physical Therapy Department**
College:	**College of Applied Medical Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours:	2 hours [1 theoretical & 1 practical]
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	8h level /3rd year
4. Pre-requisites for this course (if any)**:**	N/A
5. Co-requisites for this course (if any)**:**	N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	4 hours/week 40 hours/semester	100%
2	**Blended**	--	--
3	**E-learning**	--	--
4	**Correspondence**	--	--
5	**Other**	--	--

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	20
2	**Laboratory/Studio**	20
3	**Tutorial**	--
4	**Others** (specify)	--
	Total	40
Other Learning Hours*		
1	**Study**	80
2	**Assignments**	20
3	**Library**	12
4	**Projects/Research Essays/Theses**	--
5	**Others** (specify)	--
	Total	112

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course provide students with a basic understanding of the structural organization of the human central nervous system in sufficient depth to form the basis for further clinical or research studies of the nervous system.

2. Course Main Objective

After completing this course successfully the student must be able to demonstrate all components of neurological structures in human body related to physical therapy demands.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	Recognize the anatomical structures of the different parts of the nervous system	K1
1.2	Describe the blood and CSF circulation of the brain	K1
1.3	State the different sensory and motor pathways	K1
2	**Skills :**	
2.1	Explain the clinical data of common neurological problems, on anatomical basis.	S 4
3	**Competence:**	
3.1	Demonstrate self-learning abilities related to updated anatomical topics	C 5

C. Course Content

No	List of Topics (Theoretical and practical)	Contact Hours
1	Cerebrum	8
2	Diencephalon	4
3	Brain stem	4
4	Cerebellum, Ventricles, and meninges	4
5	Cranial nerves	4
6	Blood supply of the nervous system	4
7	Spinal cord, Spinal nerves and autonomic system	4
8	Tractology	8
Total		40

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Recognize the anatomical structures of the different parts of the nervous system	Lecture Discussion + demonstration	Written exams Quiz Practical exam
1.2	Describe the blood and CSF circulation of the brain		
1.3	State the different sensory and motor pathways		
2.0	**Skills**		
2.1	Explain the clinical data of common neurological problems, on anatomical basis.	Lecture Assignment Case study	Written exams Quiz
3.0	**Competence**		
3.1	Demonstrate self-learning abilities related to updated anatomical topics	Practical session	Assignment Presentation

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Final written exam	12th	40%
2	Final practical exam	11th	20%
3	Mid-term written exam	7th	20%
4	Mid-term practical exam	8th	10%
6	Assessment	All through	10%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

4Course instructors are available for individual consultation at times when they are not engaged in lectures and other administrative duties. Times available for appointment are posted on the door of the Instructor's office (6 hours weekly). Course instructor's provide a range of academic and course management advice range from course planning and subject enrolment to deal with appeals and progression issues.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Lastś anatomy (12th Edition, Regional and Applied, Authors: Chummy Sinnatamby, Imprint: Churchill Livingstone Published Date: 2011).
Essential References Materials	Gray`s anatomy for students (40th Edition, Authors: Susan Standring, printed in Spain, 2008).
Electronic Materials	-Link for the course at Blackboard Learn Portal on Taif university webpage (https://lms.tu.edu.sa/webapps/login/)
Other Learning Materials	N/A

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	N/A
Technology Resources (AV, data show, Smart Board, software, etc.)	-Internet access
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment strategies	Students	**Indirect** (Course evaluation survey and focus group discussion "small group of students").
Extent of achievement of course learning outcomes	Staff member.	**Direct** (Exams)
Quality of learning resources	Students and Staff members.	**Indirect** (Questionnaires).

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department council
Reference No.	Meeting No.9
Date	18/5/2022

قسم العلاج الطبيعي
Physiotherapy Department
TU
جامعة الطائف
TAIF UNIVERSITY

Course Specifications

Course Title:	**Neurophysiology**
Course Code:	**372336-2**
Program:	**Bachelor in Physical Therapy Program (372000)**
Department:	**Physical Therapy Department**
College:	**College of Applied Medical Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours:	2 (theoretical)
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered	8th level /3rd year
4. Pre-requisites for this course (if any)**:**	Physiology for Physical Therapy (372111-4)
5. Co-requisites for this course (if any)**:**	N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	3 hours/week (30 hours/semester)	100%
2	**Blended**	-	-
3	**E-learning**	-	-
4	**Correspondence**	-	-
5	**Other**	-	-

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	30
2	**Laboratory/Studio**	-
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	30
Other Learning Hours*		
1	**Study**	40
2	**Assignments**	10
3	**Library**	6
4	**Projects/Research Essays/Theses**	-
5	**Others**(specify)	-
	Total	56

***The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course is to provide the students with basic theoretical neurophysiological knowledge that are necessary for physical therapist by studying various functions the nervous system (both central and peripheral nervous system), integration of sensory, motor and equilibrium system, which help to understand clinical aspect of neurological disorders.

2. Course Main Objective

The main objective of this course is to provide:

- Understand the physiology of the nervous system (central and peripheral nervous system).
- Differentiate between different types of nerve fibers.
- Recognize the functions of the sensory system.
- Identify the functions of different ascending and descending pathways.
- Describe the functions vestibular system and autonomic nervous system.
- Understand some applied clinical aspect of neurological disorders.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge:**	
1.1	- Recognize properties, classification and parts/components of nervous system, synapses and vestibular system and describe their functions and components and characters of reflex arc.	K1
1.2	- Identify the resting membrane potential, action potential and synaptic potential and list their properties and factors affecting.	K1
1.3	- Identify functions, types of receptor and different types of sensations, pain sensation and their pathways.	K1
2	**Skills:**	
2.1	- Compare between; the structural, functional properties of different parts in the nervous system, vestibular system, different types of pain, ascending tracts, descending tracts, action potential and synaptic potential, conduction of nerve impulses in different nerves and compare between the characteristics and functions of different neurotransmitters and different receptors.	S1
2.2	- Predict the effect of injury and disorders of different parts of the nervous system and the vestibular system and differentiate between UMNL & LMNL	S4
3	**Competence:**	
3.1	Use self-learning to increase the knowledge and promote skills.	C3
3.2	Research a library and internet as a source of knowledge to prepare and introduce assignments and presentation.	C5

C. Course Content

No	List of Topics	Contact Hours
1	The Central Nervous System (cerebral cortex, brain stem, basal ganglia cerebellum & spinal cord) [Guyton and Hall textbook of medical physiology: Chapter: 55 (Pages: 695-706) & Chapter: 56 (Pages: 707-720), Chapter: 57 (Pages: 721-736), Chapter: 58 (Pages: 737-750), Chapter: 59 (Pages: 751-762)]	6
2	The Descending Tracts: Pyramidal and Extra-pyramidal [Guyton and Hall textbook of medical physiology: Chapter: 12, Pages: 333 - 350]	3
3	Tissues within the nervous system	3

	[Gerard J: Principles of Anatomy and Physiology: Chapter 12, pages: 402 – 445].	
4	Neurons and Action potential [Guyton and Hall textbook of medical physiology: Chapter: 5, Pages: 71-74]	3
5	Sensory Receptors, Somatic Sensations and Ascending tracts [Guyton and Hall textbook of medical physiology: Chapter: 47 (Pages: 595-606) & Chapter: 48 Pages: 607-620)]	3
6	Synapses and Synaptic Transmission [Guyton and Hall textbook of medical physiology: Chapter: 45 (Pages: 555-571)]	3
7	Physiology of Pain sensation [Guyton and Hall textbook of medical physiology: Chapter: 49, Pages: 621-634]	3
8	Vestibular system. [Guyton and Hall textbook of medical physiology: Chapter 56 Pages: 707-720]	3
9	Autonomic nervous system. [Guyton and Hall textbook of medical physiology: Chapter: 61, Pages: 773-786]	3
Total		30

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	- Recognize properties, classification and parts/components of nervous system, synapses and vestibular system and describe their functions and components and characters of reflex arc.	Lecturing	Theoretical exams Quiz
1.2	- Identify the resting membrane potential, action potential and synaptic potential and list their properties and factors affecting.		
1.3	- Identify functions, types of receptor and different types of sensations, pain sensation and their pathways.		
2.0	**Skills**		
2.1	- Compare between; the structural, functional properties of different parts in the nervous system, vestibular system, different types of pain,	Lecturing Discussion	Theoretical exams

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	ascending tracts, descending tracts, action potential and synaptic potential, conduction of nerve impulses in different nerves and compare between the characteristics and functions of different neurotransmitters and different receptors.	Case study	Quiz
2.2	- Predict the effect of injury and disorders of different parts of the nervous system and the vestibular system and differentiate between UMNL & LMNL		
3.0	**Competence**		
3.1	Use self-learning to increase the body of knowledge and promote skills.	Internet and library search Discussion	Assignment Presentation
3.2	Research a library, and internet as a source of knowledge to prepare and introduce assignments and presentation		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-term exam	7th	30%
2	Assignment & Presentation	5th	30%
3	Final written Exam	12th or 13th	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Course instructors are available for individual consultation at times when they are not engaged in lectures and other administrative duties.Times available for appointment are posted on the door of the Instructor's office (6 hours weekly). Course instructor's provide a range of academic and course management advice range from course planning and subject enrolment to deal with appeals and progression issues.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	-Hall JE. Guyton and Hall textbook of medical physiology (13th edition). ELSEVIER, Philadelphia. 2015. ISBN: 978-1-4557-7005- 2- -Tortora GJ, Derrickson BH. Principles of Anatomy and Physiology (15th edition). Wiley, 2017. ISBN: 978-1-119-40006-6 May

Essential References Materials	Barrett KE, Barman SM, Boitano S: Ganong's Review of Medical Physiology (26th edition), 2019.
Electronic Materials	Link for the course at Blackboard Learn Portal on Taif university webpage (https://lms.tu.edu.sa/webapps/login/) - SDL (on Taif University website).
Other Learning Materials	N/A

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Classroom
Technology Resources (AV, data show, Smart Board, software, etc.)	- Data show - Internet access
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment strategies	Students	**Indirect** (Course evaluation survey and focus group discussion "small group of students").
Extent of achievement of course learning outcomes	Staff member.	**Direct** (Exams)
Quality of learning resources	Students and Staff members.	**Indirect** (Questionnaires).

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods(Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department council
Reference No.	Meeting No.9
Date	18/5/2022

قسم العلاج الطبيعي
Physiotherapy Department

Course Specifications

Course Title:	**Physical Therapy for Sports Injuries**
Course Code:	**372335-2**
Program:	**Bachelor in Physical Therapy Program (372000)**
Department:	**Department of Physical Therapy**
College:	**College of Applied Medical Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours:	2 (1theoretical and 1practical)
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered	8th level/3rd year
4. Pre-requisites for this course (if any)**:**	Physical Therapy for Traumatology and Orthopedic Diseases (372317-4)
5. Co-requisites for this course (if any)**:**	N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	4 hours/week (40 hours/semester)	100%
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	20
2	**Laboratory/Studio**	20
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	40
Other Learning Hours*		
1	**Study**	80
2	**Assignments**	20
3	**Library**	12
4	**Projects/Research Essays/Theses**	-
5	**Others**(specify)	-
	Total	112

***The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

It is complementary to the Physiotherapy for traumatology and orthopedics course but focusing on the athletes rather than patients, and on athletic injuries. This course is essential for both orthopedic physical therapist and athletic physical therapist.

2. Course Main Objective

The main objective of this course is to enable students to identify common sport injuries and evaluate athletics with sport injuries that might occur with recreational and/or competitive sports and, as well as design treatment, rehabilitation, and injury prevention program, and evaluate athletic ability to return to sport and maintain physical wellbeing.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	Recognize the pathomechanics, signs and symptoms and stages of disease/healing of various sports injuries and disorders	K2
1.2	Recognize various physical therapy techniques, modalities and methods employed in evaluation and treatment of sports injuries.	K3
1.3	Describe the principles, concepts, and processes of physical therapy methods of treatment used for treatment and rehabilitation after sports injuries.	K3
2	**Skills:**	
2.1	Correlates between methods of treatment used to treat sports injuries and aims of treatment according to stage of disease/healing	S2
2.2	Design and apply individualized physical therapy program for patients and athletes based on detected problems, nature of the disease, stage of healing and based on evidence	S3
3	**Competence:**	
3.1	Perform all assessment and treatment tasks correctly, safely, and independently	C4
3.2	Uses different self-learning skills; library, internet, etc. for preparing and introduce assignments.	C3

C. Course Content

No	List of Topics (Theoretical)	Contact Hours
1	Introduction to sport injuries: Healing and recovery	2
2	Muscular system.	2
3	Shoulder injuries: Impingement syndrome.	2
4	Elbow injuries: Tennis elbow.	2
5	Wrist and hand injuries: De Quervain disease.	2
6	Hip injuries: Hamstring strain.	2
7	Knee injuries: Meniscal injury Patellofemoral pain syndrome. Anterior cruciate ligament injury	4
8	Ankle and foot: Achilles tendinopathy Ankle sprain	4
	Total	20
No	**List of Topics (Practical)**	**Contact**

		Hours
1	Assessment of athletic injuries	2
2	First aids of sport injuries	4
3	Taping (classic rigid, Kinesio) and bandaging.	4
4	Isokinetic training	2
5	Strengthening and reconditioning training	2
6	Proprioceptive training	2
7	Plyometric training	2
8	Injury prevention	2
Total		20

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	TeachingStrategies	AssessmentMethods
1.0	**Knowledge**		
1.1	Recognize the pathomechanics, signs and symptoms and stages of disease/healing of various sports injuries and disorders	Lecture	Quiz and theoretical exam
1.2	Recognize various physical therapy techniques, modalities and methods employed in evaluation and treatment of sports injuries.	Lecture	Quiz and theoretical exam
1.3	Describe the principles, concepts, and processes of physical therapy methods of treatment used for treatment and rehabilitation after sports injuries.	demonstration	Oral and practical exam
2.0	**Skills**		
2.1	Correlates between methods of treatment used to treat sports injuries and aims of treatment according to stage of disease/healing	Lecturing Discussion	Written exams Assignment Quiz
2.2	Design and apply individualized physical therapy program for patients and athletes based on detected problems, nature of the disease, stage of healing and based on evidence	Lectures Case study Laboratory class	Written exam Quiz Oral and practical exam
3.0	**Competence**		
3.1	Perform all assessment and treatment tasks correctly, safely and independently	Demonstrations Laboratory class	Oral and practical exam

3.2	Uses different self learning skills; library, internet, etc. for preparing and introduce assignments.	Assignment preparation	AssignmentsPresentation

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-term written exam	5th	20%
2	Mid-term practical exam	6th	10%
3	Assignment	8th	20%
4	Final written exam	11th	30%
5	Final practical exam	12th	20%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

The department has a committee for students' academic counseling. It works under the supervision of Students' Advisory Office, which is administratively and organizationally affiliated with the University's Vice Presidency for Academic Affairs & Development. The office is concerned with providing student support and academic, psychological and professional advising.

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Academic advising services includes:

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- Solving students' issues with their instructors,
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- Advising students on issues related to failure and working towards offering opportunities for their success.

Academic advising student handbook (https://drive.google.com/file/d/1BUTpD-Hoc9dHidXlrGk8-3fNNHnvbkNY/view)

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- Seidenberg and butler: the sports medicine resource manual. 2008
Essential References Materials	Prentice: RehabilitationTechniques forSports Medicineand Athletic Training American journal for sorts injury - Link for the course at Blackboard Learn Portal on Taif university webpage (https://lms.tu.edu.sa/webapps/login/)
Electronic Materials	- Pubmed.com - SDL.com - Youtube.com
Other Learning Materials	N/A

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Classroom - Laboratory
Technology Resources (AV, data show, Smart Board, software, etc.)	- Data show - Internet access
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment strategies	Students	**Indirect** (Course evaluation survey and focus group discussion "small group of students").
Extent of achievement of course learning outcomes	Staff member.	**Direct** (Exams)
Quality of learning resources	Students and Staff members.	**Indirect** (Questionnaires).

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, PeerReviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department council
Reference No.	Meeting No.9
Date	18/5/2022

Course Specifications

Course Title:	**Therapeutic Exercise (2)**
Course Code:	**372319-2**
Program:	**Bachelor in Physical Therapy Program (372000)**
Department:	**Department of Physical Therapy**
College:	**College of Applied Medical Sciences**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. Credit hours:	2 (1 theoretical+ 1 practical)
2. Course type:	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	8th level /3rd year
4. Pre-requisites for this course (if any)**:**	Therapeutic Exercise (1) 372121-3
5. Co-requisites for this course (if any)**:**	NA

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	4 hours/week (40 hours/semester)	100%
2	**Blended**	-	-
3	**E-learning**	-	-
4	**Correspondence**	-	-
5	**Other**	-	-

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	20
2	**Laboratory/Studio**	20
3	**Tutorial**	-
4	**Others** (specify)	-
	Total	40
Other Learning Hours*		
1	**Study**	80
2	**Assignments**	20
3	**Library**	12
4	**Projects/Research Essays/Theses**	--
5	**Others**(specify)	-
	Total	112

***The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course focuses on different types of therapeutic exercises and manual therapy techniques and its indication, contraindication, precaution, and how to apply it.

2. Course Main Objective

The main objective of the course is to enable physical therapy students to apply various types of therapeutic exercises and manual therapy techniques for different purposes, considering the guidelines for safe and sound performance.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	Describe different types of therapeutic exercises and manual therapy techniques and their characteristics, aims, and effects.	K3
1.2	Recognize the basic principles, uses, indications and contraindications of different types of therapeutic exercises/techniques.	K3
2	**Skills**	
2.1	Evaluate the movement problem of patient based on physiotherapeutic testing procedures.	S2
2.2	Design the treatment plan according to assessment findings.	S3
2.3	Apply different therapeutic exercises/techniques for the joints of the upper and the lower limbs and the spine properly and safely.	S4
3	**Competence:**	
3.1	Use self-learning to increase the body of knowledge and promote skills.	C3
3.2	Perform all practical tasks correctly, safely and independently.	C4
3.3	Research a library, and internet as a source of knowledge to prepare and introduce assignment.	C5

C. Course Content

No	List of Topics (theoretical)	Contact Hours
1	Posture	2
2	Scoliosis	2
3	Types of motion and motion restrictions	2
4	Introduction to joint mobilization	2
5	Upper and lower limbs mobilization	2
6	Cervical spine assessment& mobilization	2
7	Lumbar spine assessment& mobilization	2
8	Proprioceptive neuromuscular facilitation of UL	2
9	Proprioceptive neuromuscular facilitation of LL	2
10	Spinal traction	2
Total		20

No	List of Topics (practical)	Contact Hours
1	Assessment of Posture	2
2	Postural abnormalities (assessment and treatment)	2
3	Assessment and treatment of Scoliosis	2
4	Mobilization of the upper limb	2
5	Mobilization of the lower limb	2
6	Assessment and mobilization of the cervical spine	2
7	Assessment and mobilization of the lumbar spine	2
8	Proprioceptive neuromuscular facilitation of UL	2
9	Proprioceptive neuromuscular facilitation of LL	2
10	Spinal traction	2
Total		20

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Describe different types of therapeutic exercises and manual therapy techniques and their characteristics, aims, and effects.	Lecturing Discussion	Written exams Assignment Quiz
1.2	Recognize the basic principles, uses, indications and contraindications of different types of therapeutic exercises/techniques.		
2.0	**Skills**		
2.1	Evaluate the movement problem of patient based on physiotherapeutic testing procedures.	Lecturing Discussion Case study Practical session	Written exam Assignment Quiz Practical exam
2.2	Design the treatment plan according to assessment findings.		
2.3	Apply different therapeutic exercises/techniques for the joints of the upper and the lower limbs and the spine properly and safely.		
3.0	**Competence**		
3.1	Use self-learning to increase the body of knowledge and promote skills.	Project Practical session	Practical exam Assignment Presentation Project evaluation
3.2	Perform all practical tasks correctly, safely and independently.		
3.3	Research a library, and internet as a source of knowledge to prepare and introduce assignment.		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Final theoretical exam	12th or 13th	40%
2	Final practical exam	11th	20%
3	Mid-term theoretical exam	7th	20%
4	Mid-term practical exam	8th	10%
5	Assignment	5th	10%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

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F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- Kisner C, Colby LA. Therapeutic exercise: Foundation and techniques. 6 ed. F.A. Davis Company: Philadelphia, 2012 - Levangie PK, Norkin CC. Joint Structure and Function: A Comprehensive Analysis. 4th Ed. Davis Company, 2005 - Kaltenborn FM. Manual Mobilization of the Joints 4th Ed. Norli, Universitetsgaten. Oslo, Norway. 2003
Essential References Materials	- Edmond S. Joint Mobilization/Manipulation: Extremity and Spinal Techniques 3rd Edition. Elsevier 2016.

	- Journal of the American Physical Therapy Association - Archives of Physical Medicine and Rehabilitation - Journal of Physical Therapy Science - Journal of Occupational and Environmental medicine
Electronic Materials	- Link for the course at Blackboard Learn Portal on Taif university webpage (https://lms.tu.edu.sa/webapps/login/)
Other Learning Materials	- NA

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Classroom - Laboratory
Technology Resources (AV, data show, Smart Board, software, etc.)	- Data show - Internet access
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- Stationary bicycle - Sandbags, dumble - Traction system - Shoulder Wheel - Quadriceps chair - Wall bar and parallel bar

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment strategies	Students	**Indirect** (Course evaluation survey and focus group discussion "small group of students").
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Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department council
Reference No.	Meeting No.9
Date	18/5/2022

قسم العلاج الطبيعي
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TU
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