Philadelphia University		**Approval date: 8-10-2025**
Faculty: Allied Medical Sciences		
Department: Physical Therapy		**Credit hours: 1**
Academic year 2025/2026	**Course Syllabus**	**Bachelor**

Course information

Course#	Course title	Co /Pre-requisite
1120410	Electro diagnostic for physiotherapist	

Course type	Class time	Room #
☐ University Requirement ☐ Faculty Requirement ☒ Major Requirement ☐ Elective ☐ Compulsory	Tue 20:00-21:00	online

Course Level*	Hours No.*
6th ☒ 7th ☐ 8th ☐ 9th☐	1

Instructor Information

Name	Office No.	Phone No.	Office Hours	E-mail
Assistant Professor Dr.asmaa atwa	09-15409	2465	Sat (10:15-11:15) Sun (10:15-13:05) Tuesday(10:15-12:15)	atwaa@philadelphia.edu.jo

Course Delivery Method

Course Delivery Method			
☐ Physical	☒ Online	☐ Blended	
Learning Model			
Precentage	**Synchronous**	**Asynchronous**	**Physical**
	100%		

Course Description

This course is provide students with in-depth exploration about Introduction to electro diagnosis. Phases of action potential and its propagation and motor unit. EMG examination for UL and LL muscles. Nerve conduction studies and different nerve lesions. Upper extremity NCS and common pathologies (Ulnar, median and radial). Lower extremity NCS and common pathologies. Somatosensory evoked potential. Evaluation of patients with anterior horn cells,

neuromuscular disorders and muscles disease, Late responses H- reflexes and F- waves, knowledge about EEG interpretation.

Course Learning Outcomes

	Number	Outcomes	Corresponding Program outcomes
Knowledge			
1	**K1**	Demonstrate entry level knowledge in electro diagnostic studies	**Kp3**
2	**K2**	Develop an appropriate plan of care in collaboration with all interested parties.	**Kp3**
Skills			
4	**S1**	Utilize the process of electromyography and nerve conduction velocity and EEG	**Sp1**
Competencies			
5	**C1**	Properly use and interpret standardized outcomes measures of EMG, NCV,EEG	**Cp3**

Learning Resources

Course textbook	**Easy EMG,A Guide to Performing Nerve Conduction Studies and Electromyography,Book • Second Edition • 2016** **Atlas of Nerve Conduction Studies and Electromyography 2nd Edition by A. Arturo Leis (Author), Michael P. Schenk (Author)** **Electroencephalography: Textbook and Atlas Textbook by Hans O. Luders, Jan Rémi, and Soheyl Noachtar**
Supporting References	McLean EMG Guide, 2nd Edition Edited by:Chu, Samuel K., MD ,Jayabalan, Prakash, MD, PhD |,Visco, Christopher J., M
Supporting websites	https://www.physio-pedia.com/
Teaching Environment	**☒Classroom ☐ laboratory ☒Learning platform ☐Other**

Meetings and subjects' timetable

Week	Topic	Learning Methods	Learning Material
Week 1	Course syllabus, Vision, Mission, Aim and LO of the Program -introduction	Lecture	Vision, Mission, Aim and ILOs of the Program
Week 2	Anatomy and physiology Introduction to EDX	Lecture Problem solving based learning	Pre-prepared Presentations Text book reference
Week 3	Indications of EDX	Lecture & Problem solving based learning	Pre-prepared Presentations Text book reference
Week 4	EMG 1	Lecture	Pre-prepared Presentations Text book reference
Week 5	EMG 2 Quiz 1	Lecture & Problem solving based learning	Pre-prepared Presentations Text book reference
Week 6	EMG 3	Lecture Problem solving based learning	Pre-prepared Presentations Text book reference
Week 7	Revision	Lecture	Pre-prepared Presentations Text book reference
Week 8	Midterm	Exam	Exam
Week 9	NCV upper limb	Lecture	Pre-prepared Presentations Text book reference
Week 10	NCV lower limb	Lecture & Problem solving based learning	Pre-prepared Presentations Text book reference

Week 11	**Late responses H- reflexes and F- waves** **Assignment**	**Lecture** **Problem solving based learning**	**Pre-prepared Presentations Text book reference**
Week 12	**Radiculopathy** **Quiz 2**	**Lecture & Problem solving based learning**	**Pre-prepared Presentations Text book reference**
Week 13	**EEG 1**	**Lecture & Problem solving based learning**	**Pre-prepared Presentations Text book reference**
Week 14	**EEG 2**	**Lecture**	**Pre-prepared Presentations Text book reference**
Week 15	**Revision**	**Lecture**	**Pre-prepared Presentations Text book reference**
Week 16	**Final exam**		

* Includes: Lecture, flipped Class, project- based learning, problem solving based learning, collaborative learning

Course Contributing to Learner Skill Development

Using Technology
Students will be introduced to navigating and reading professional websites.
Communication skills
Students will be introduced to communicate with patient/client regarding assessment outcomes and therapeutic program
Application of concepts learned
Students will be introduced to interpretation and integration of finding from multiple sources

Assessment Methods and Grade Distribution

Assessment Methods	Grade Weight	Assessment Time (Week No.)	Link to Course Outcomes
Mid Term Exam	**30%**	7-8 the	**K1, K2**
Various Assessments *	**% 30 Quizzes :10 marks Assignments: 20 marks**	Continuous	**S1, C1**
Final Exam	**40%**	16 th	**K1, K2, S1, and C1**
Total	**100%**		

* Includes: 2 quizzes (10% each, see course outline for schedule, the highest quiz will be taken) and assignments (20%, see below for description and due date).

Alignment of Course Outcomes with Learning and Assessment Methods

Number	Learning Outcomes	Learning Method*	Assessment Method**
Knowledge			
K1	Demonstrate entry level knowledge in electro diagnostic studies	On line Lecture, Discussion	Exam and quizzes
K2	Develop an appropriate plan of care in collaboration with all interested parties.	On line Lecture, Discussion	Exam and quizzes
Skills			
S1	Utilize the process of electromyography and nerve conduction velocity and EEG.	On line Lecture, case scenarios	Exam, quizzes, and assignment
Competencies			
C1	Properly use and interpret standardized outcomes measures for the patient with neurological involvement	On line Lecture, case scenarios	Exam, quizzes, and assignment

Assignment

The course instructor will provide students with case scenarios about the neurological conditions discussed in the course. Students are requested to answer the questions about cases provided within 5 – 7 days after the instructor posts the cases on the Moodle. Late submission will not be accepted. Cases will be discussed in the classroom or the lab after the submission deadline. **The use of AI sites**

in anyway to answer the questions will be considered cheating, actions will be taken against violators.

Course Polices

Policy	Policy Requirements
Passing Grade	The minimum passing grade for the course is (50%) and the minimum final mark recorded on transcript is (35%).
Missing Exams	• Missing an exam/ quiz without a valid excuse will result in a zero grade to be assigned to the exam/ quiz. • A Student who misses an exam or scheduled assessment, for a legitimate reason, must submit an official written excuse within a week from the exam or assessment due date. • A student who has an excuse for missing a final exam should submit the excuse to the dean's office within three days of the missed exam date.
Attendance	The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to 4.5 hours of lectures days (Sun, Tus). If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory excuse accepted by the dean of the faculty, she/he will be prohibited from taking the final exam and the grade in that course is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college, then withdrawal grade will be recorded.
Academic Honesty	Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as: **cheating, plagiarism** (academic theft), collusion, and violating intellectual property rights.

Program Learning Outcomes to be assessed in this Course

Number	Learning Outcome	Course Title	Assessment Method	Target Performance level
Kp3	Develop an individualized appropriate plan of care based on information collected and assessment performed for each patient/ client.	**Electro diagnostic for physiotherapist**	Exams, Quizzes	75% of students will get 60% or more of the total score
Sp1	Develop critical analysis and decision-making skills and ability to integrate basic and clinical knowledge within an evidence-based framework.	**Electro diagnostic for physiotherapist**	Exams, Quizzes, Assignment	75% of students will get 60% or more of the total score
Cp3	CP3: Perform assessments, develop treatment plans, and	**Electro diagnostic for physiotherapist**	Exams, Quizzes, Assignment	75% of students will get 60% or more of the total score

	execute therapeutic interventions effectively.			

Description of Program Learning Outcome Assessment Method

Number	Detailed Description of Assessment
Kp3	MCQ questions in midterm and final exam
Sp1	The assessment will based on students' ability: (1) to solve neurological issues related to diseases in exams, (2) to determine the neurological diagnosis in cases solved in the lab, and (3) to deliver a full project assignment about a topic in neurology PT and discusses it orally with instructor
Cp3	MCQ questions in the final exam

Assessment Rubric of the Program Learning Outcomes

Project assignment will be evaluated, totaling 20 points as follows

- **Introduction to the topic**: proper generation of questions about the problem (diagnosis) , **four marks**
- **Quality of information:** complete and concise answers, **four marks**
- **Information gathering:** sources of information and citation, **four marks**
- **Grammar and spelling, the flow of information, organized writing, clear, one marks**
- **Graphs and photos**: are engaging and enhance text, **two mark**
- **Presentation: customized rubric, four marks**
- **Teamwork: one mark**

All reports should be printed, No handwriting.

Good luck