	Ministry of Higher Education and Scientific Research - Iraq Al-Mustaqbal University College of Engineering Department of Prosthetics and Orthotics Engineering	

MODULE DESCRIPTOR FORM
نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	الجهاز العصبي			**Module Delivery**	
Module Type	CORE			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	UOMU0103056				
ECTS Credits	4				
SWL (hr/sem)	100				
Module Level	3		**Semester of Delivery**	5	
Administering Department	UOMU0103		**College**	UOMU01	
Module Leader			**e-mail**		
Module Leader's Acad. Title	Lect. Dr.		**Module Leader's Qualification**	PhD.	
Module Tutor					
Peer Reviewer Name			**e-mail**		
Review Committee Approval	01/06/2023		**Version Number**	1.0	

Relation With Other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Anatomy	**Semester**	3
Co-requisites module		**Semester**	
Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية			
Module Aims أهداف المادة الدراسية	The academic program in the Department of Prosthetics and Orthotics aims to: 1- Supporting the student scientifically and qualifying him to work in the field of limbs and Orthotics. 2. Supporting and preparing the student psychologically to play his role as a reliable engineer in this field. 3- Supporting students who are able to compete with other engineers for job opportunities and obtain the required seats in completing postgraduate studies. 4- Encouraging the student to be creative and think about specialization projects and to keep abreast of the development in this field. 5- Studying (human anatomy, focusing on the skeletal and muscular structure, as it is directly related to the specialization of the department).		
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon successful completion of Neurons students will be able to: 1. Understanding and teaching students the basics of body parts and their functions. 2. Enabling students to obtain knowledge and understanding in working on the appropriate diagnosis of the disease. 3. To make the student understand the methods of determining the patient's needs, as well as to enable students to obtain knowledge and understanding of the practical framework in the field of manufacturing limbs and supports. 4. Enabling students to obtain knowledge and understanding of the functions of members and the mechanism of their work. 5. Enabling students to obtain knowledge and understanding of the movement of the parts of the skeleton and its relationship to muscles. 6. Enabling students to know the problems that accompany the process of wearing a limb or support and ways to solve them. 7. Students know that the course is the basis for understanding the basics of human anatomy. To make students understand that the course is the basis on which ideas and methods for developing the field of prosthetic limbs and supports are built.		

Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1- Explain the parts of the skeleton. 2 - Identify the types of muscles and the mechanism of their work. 3 - The relationship of nerves with the movement of the limbs and the spinal cord. 4 - Linking theoretical information with possible pathological conditions. 5- Providing them with skills in diagnosing the disease and following up the development of the disease.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students, and also through field visits to the neurological laboratory of the hospital, approximately four to five field visits.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)		
	Assignments	2	10% (10)		
	Projects / Lab.	1	10% (10)		
	Report	2 hr	20% (20)		
Summative assessment	Midterm Exam	2hr	50% (50)		
	Final Exam	2	10% (10)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Physiology of nerve system • central nervous system peripheral nervous system
Week 2	Morphology of the central nervous system • brain spinal cord
Week 3	Morphology of the peripheral nervous system (part I) cranial nerves
Week 4	Morphology of the peripheral nervous system (part II) spinal nerves
Week 5	Neural Control Mechanisms (part I) • Structure and Maintenance of Neurons • Functional Classes of Neurons Neural Growth and Regeneration
Week 6	Neural Control Mechanisms (part II) • Membrane potentials • Basic principles of electricity The resting membrane potential, graded potentials, and action potentials
Week 7	Neural Control Mechanisms (part III) • Functional Anatomy of Synapses • Activation of the Postsynaptic Cell Synaptic Effectiveness
Week 8	Neural Control Mechanisms (part IIII) • Neurotransmitters and Neuromodulators Neuroeffector Communication

Week 9	Nerves of upper limb (part I)
Week 10	Nerves of upper limb (part II)
Week 11	Nerves of lower limb (part I)
Week 12	Nerves of lower limb (part II)
Week 13	Physiological disorders affect the nervous system (part I) Injuries to the brain and spinal cord Chronic neurodegenerative diseases
Week 14	Physiological disorders affect the nervous system (part II) CNS Infections Psychiatric disorders
Week 15	Peripheral molecular change and central nervous system adaptation following amputation Sensory system

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	– **الكتب المنهجية** 1- Textbook of General Anatomy- snell clinical anatomy 2019 Gyton textbook of physiology	No
Recommended Texts	1- HUMAN ANATOMY - Color Atlas and Textbook- J.A.G., P.F.H., J.R.H., I.W., P.L.T.W. Sixth edition 2017. 2- Text book of Anatomy – Inderbir Singh – 5th. Edition - Published by Jaypee Brothers Medical Publishers (P) Ltd, 2011.	No
Websites	All net sources	

APPENDIX:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A -** Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C –Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings

	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

ملاحظة: هذا النموذج تم وضعه وتقديمه من قبل مديرية ضمان الجودة في وزارة التعليم العالي والبحث العلمي