



MODELLO SCHEDA INSEGNAMENTO

Corso di LM	Biologia
Denominazione insegnamento:	Fisiologia Umana
Numero di Crediti:	12 (96 ore)
Semestre:	I anno I semestre
Docente Titolare:	Elena Silvestri
Dottorandi/assegnisti di ricerca che svolgono attività didattica a supporto del corso:	
Orario di ricevimento:	Mercoledì ore 15:00-17:00; Venerdì ore 15:00-17:00
Indirizzo	silvestri@unisannio.it

PRESENTAZIONE DEL CORSO:

Upper central nervous system physiology. Mechanics, control and metabolism of muscle fibers. Physiology of the cardio-circulatory system. Functions and regulation of renal excretion system.

GLI OBIETTIVI FORMATIVI

Understanding the mechanisms behind the superior human functions and systemic homeostasis as the integration of peripheral functions.

PREREQUISITI RICHIESTI

Knowledge Required: General Physiology

FREQUENZA DELLE LEZIONI

Although not mandatory according to the University Teaching Document, frequency is recommended. The student can benefit from presenting the topics interpreted and linked by

the lecturer in the classroom as well as participating in interactive didactics and virtual exercises.

CONTENUTI DEL CORSO

Physiology of the higher functions. Brain electrical activity; Physiological basis of EEG, sleep and wakefulness; genesis of slow-wave sleep; genesis of REM sleep. Learning and memory, synaptic plasticity; neurobiological basis. Neurophysiology: synapses and junctions; classical neurotransmitters, peptides and neuro neuro mediators; modulation of synaptic transmission, neuronal plasticity. Muscle physiology: Mechanics of skeletal muscle metabolism and skeletal muscle fiber types, control of motor activity, smooth muscle and cardiac muscle. Physiology of the cardiovascular system: Electrical activity of the heart, The mechanical events of the cardiac cycle, cardiac output and its regulation, Nutrition of the heart muscle. The blood flow and blood pressure control. The system of excretion: glomerular filtration, tubular reabsorption, tubular secretion, Urinary excretion and renal clearance. Fluid balance and acid-base balance.

METODI DIDATTICI

Frontal lessons, virtual laboratories.

TESTI DI RIFERIMENTO

- Filologia, Autori vari, Poletto Editore
- Fisiologia: dalle molecole ai sistemi integrati, di Emilio Carbone, Federico Cicirata, Giorgio Aicardi
- FISILOGIA- Stanfield CL. -Edises

ESAME DI PROFITTO

Oral exam

CALENDARIO ESAMI

Rinvio al link

PRENOTAZIONE ESAMI

Rinvio al link

SYLLABUS

MODELLO SYLLABUS

Argomenti	Ore	Riferimenti bibliografici	Tipologia di lezione
Muscle contractility	32	Recommended bibliography	Frontal lessons, virtual laboratory
hemodynamic	4	Recommended bibliography	Frontal lessons
Motor control	8	Recommended bibliography	Frontal lessons
Kidney functions	10	Recommended bibliography	Frontal lessons
Central nervous system functions	32	Recommended bibliography	Frontal lessons, virtual laboratory
Physiopathology of the studied systems	10	Recommended bibliography	Frontal lessons