VIDEO TUTORIALS FOR MODULE 3 - BASIC ELECTRICITY

These videos are useful to build basic concepts necessary to understand principles and practice of sEMG".

	**These video lectures are offered within the course "Physics To Physiotherapy" taught by** **Dr Sanjeev Gupta** – A senior Physiotherapy Academician **Head** – Department of Physiotherapy, School of Medical & Allied Sciences, G D Goenka University, India	**Tel** : +91 9873430002 **E-mail** sanjivgupta_india1@yahoo.co.in **Home** - 108, Starlite Apartments, Sector–14 Extn., Rohini, Delhi -110085
HEADING	**DESCRIPTION**	**LINKS**
YouTube	**CHANNEL – PHYSICS TO PHYSIOTHERAPY BY DR. SANJEEV GUPTA**	https://www.youtube.com/channel/UC25KmOm1yqS15CQExBOAmow?view_as=subscriber
	Playlist 01 - BASIC ELECTRICITY	
VIDEO 01 **30 min**	01 ESSENTIALS OF CURRENT ELECTRICITY • FUNDAMENTAL CHARGES • COULOMB FORCE • ELECTRIC FIELD • ELECTRIC POTENTIAL	https://www.youtube.com/watch?v=B3xlvdf3ogo&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=1
VIDEO 02 **28 min**	02 ESSENTIALS OF CURRENT ELECTRICITY • CONCEPT OF ELECTRICAL POTENTIAL • ZERO, POSITIVE AND NEGATIVE POTENTIAL • SPONTANEOUS MOVEMENT OF CHARGE • POTENTIAL DIFFERENCE	https://www.youtube.com/watch?v=4B5cViWRAO4&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=2
VIDEO 03 **20 min**	03 ESSENTIALS OF CURRENT ELECTRICITY • BUILDING POTENTIAL DIFFERENCE • MAINTAINING CONSTANT POTENTIAL DIFFERENCE • RECYCLING OF CHARGES • CONCEPT OF ELECTRIC BATTERY	https://www.youtube.com/watch?v=Bjf2FTAXRT8&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=4
VIDEO 04 **27 min**	04 ESSENTIALS OF CURRENT ELECTRICITY • CONCEPT OF ELECTRICAL CURRENT • REQUISITES FOR FLOW OF ELECTRICAL CURRENT • CREATION OF POTENTIAL DIFFERENCE • CONSTANT VOLTAGE – ELECTRICAL PUMP • CONSTANT CURRENT CIRCUITS	https://www.youtube.com/watch?v=p8y2goKZyUg&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=3
VIDEO 05 **44 min**	05 ESSENTIALS OF CURRENT ELECTRICITY • STRUCTURE OF ATOM • ENERGY BAND THEORY • CONDUCTION IN METALS • CONDUCTION IN ELECTROLYTES • DISPLACEMENT CURRENT	https://www.youtube.com/watch?v=J_T7qC5rWro&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=5
VIDEO 06 **26 min**	06 CURRENT ELECTRICITY : OHM'S LAW & CONCEPT OF RESISTANCE • CONVENTIONAL CURRENT • OHM'S LAW • CONCEPT OF RESISTANCE • OHMIC AND NON-OHMIC MATERIALS • ELECTRICAL RESISTANCE – MECHANICAL FRICTION • CONDITIONS TO APPLY OHM'S LAW	https://www.youtube.com/watch?v=O1imzgtd5AY&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=6
VIDEO 07 **50 min**	07 CURRENT ELECTRICITY: CAPACITOR AC CIRCUITS • CAPACITOR • CAPACITOR AC CIRCUITS • CHARGING AND DISCHARGING CURRENTS • CAPACITIVE REACTANCE	https://www.youtube.com/watch?v=cIDxQ_GSnE8&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=7
VIDEO 08 **51 min**	08 CURRENT ELECTRICITY: INDUCTORS IN AC CIRCUITS • INDUCTOR AC CIRCUITS • INDUCED CURRENTS IN AC CIRCUIT • INDUCTIVE REACTANCE • ELECTRICAL – MECHANICAL ANALOGY	https://www.youtube.com/watch?v=_92r2UxG4Sw&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=8
VIDEO 09 **54 min**	09 CURRENT ELECTRICITY: VOLTAGE DIVIDER AND EMG POTENTIALS • VOLTAGE DROP IN A CIRCUIT • VOLTAGE DIVIDER • MEASUREMENT OF BIO-POTENTIAL AT SKIN	https://www.youtube.com/watch?v=43k-f5rIu4s&list=PLSz28HSf-qHb4G2q9SaR_zaagMPCcLitu&index=9