

FNIRSLESSON-LIC

ADD fNIRS LESSONS TO C SERIES IMAGER

Record functional near-infrared spectroscopy (fNIRS) measurements from the forehead and the forearm at two wavelengths-730 nm for deoxygenated hemoglobin (HbR) and 850 nm for oxygenated hemoglobin (HbO₂).

Students embark on real-world fNIRS research using a student-friendly approach in these four guided lessons covering nine experiments. COBI Modern makes fNIRS experimentation easy for students to start recording in under five minutes, and users can also use it to create their own lessons. fNIRSoft includes tools for processing data and statistical analysis. Users can also import files into Excel and Matlab.

BIOPAC's fNIRS lessons are derived from scientific publications, providing students the opportunity to recreate well-known physiological phenomenon,



such as in the cuff-occlusion task, as well as discover trends in cognitive function among individuals.

Each fNIRS Lesson License provides a USB drive with the following:

- 1. Digital manual for fNIRSoft and COBI Modern (MANFNIRSEDU)
- 2. fNIRS Lesson PDFs for <u>F01-F04</u>—Restricted printing and copying
- 3. Separated Analysis Procedures (.pdf) and Data Reports (.doc and .pdf)—These may be copied and printed

C Series Imager users can purchase an fNIRS Lesson License to use with their systems. Licenses are linked to a single fNIRS Imager.

fNIRS Lessons License F01-F04

This license includes the following fNIRS lesson experiments (see Curriculum > F01-F04 for more detail):

F01 The fNIRS System and Oxygenation Changes Measured on the Forearm:

Exercise 1: Oxygenation Change Due to Blood Flow Occlusion; Exercise 2: Oxygenation Change with Gravity; Exercise 3: Muscle Oxygenation Change after Hand Grip Exercise

F02 The fNIRS System, Systemic Signals and Artifacts:

Exercise 1: Head movement Effects; Exercise 2: Skin Effect; Exercise 3: Systemic Effects-Blood **Pressure Changes**

F03 fNIRS Measurements During Verbal Fluency Tasks:

Exercise 1: Phonemics Verbal Fluency (PVF) Task; Exercise 2: Semantic Verbal Fluency (SVF) Task

F04 fNIRS Measurements During Single and Dual Tasks:

Exercise 1 Single and Dual Tasks

A license upgrade will be available to add new lesson materials when they are released.

Customers who purchased the fNIR103E System do not need to add the fNIRS Lesson License as it is NOTE: included.

