

Introduction to Matlab: Biology-Psychology

Course #205-1-9512

Sundays 12:00-14:00, Room 310, Bldg #34

This course is intended to give undergraduate students from the Biology-Psychology program a solid foundation in using Matlab for research purposes. After learning the basics of writing code in Matlab, the course will focus on building simple experiments and performing simple analyses of behavioral, MRI and EEG data. The course is taught in a computer lab and students without previous experience are expected to spend 1-2 hours every week performing exercises at home. The grade will be based on 10 assignments that will be handed in during the semester (each will account for 2% of the final grade) and the final exam that will account for 80% of the grade.

Except for class, students will sign up for one of the following lab sessions:

1. Monday 10:00-12:00, Room 6, Bldg 38. Ehud and Adam
2. Wednesday 12:00-14:00, Room 6, Bldg 38. Ehud and Shlomi

The email address for contacting the TAs is biopsychmatlab@gmail.com

Attendance in **80%** of the classes and lab sessions is obligatory.

Passing grade is 56.

Instructions for how to hand in your homework assignments can be found [here](#).

There are no scheduled office hours. If you need help, you can contact your TA by email.

A good way to learn the basics is by following this guide written by Prof. Antonia Hamilton from UCL – [PDF](#)

Lesson 1: Basics, vectors, matrices, punctuation, and indexing – [Class Files](#)

Lesson 2: Basic math, logical operators, basic functions, and basic graphs – [Class Files](#)

Lesson 3: Basic scripting and flow control – [Class Files](#)

Lesson 4: Functions and structures - [Class Files](#)

Lesson 5: Figures – [Class Files](#) , [Tutorial about object oriented programming](#)

Lesson 6: Handling files, importing, and exporting – [Class Files](#)

Lesson 7: Manipulating Images – [Class Files](#)

Lesson 8: Building a visual experiment - [Class Files](#)

Lesson 9: Analyzing behavioral data from visual experiment – [Class Files](#)

Lesson 10: Basic EEG analysis - [Class Files](#)

Lesson 11: Visual categories EEG experiment - [Class Files](#)

Lesson 12: Visual motion fMRI experiment – [Class Files](#) , [fMRI data](#)