

## NMSM Pipeline Installation Instructions

### Matlab

Download and install Matlab R2022b or newer along with the following toolboxes:

- Optimization
- Parallel Computing
- Statistics and Machine Learning
- Curve Fitting
- Symbolic Math
- Signal Processing

### OpenSim

Download and install [OpenSim 4.4 or newer](#).

After OpenSim is installed, make sure to configure Matlab to work with OpenSim. Follow the [instructions under "Setting up your Matlab Scripting Environment."](#)

### GPOPS-II (required for Treatment Optimization)

Download the GPOPS-II optimal control software.

Then:

1. Unzip the GPOPS-II distribution to a location of your choosing.
2. A temporary license is already included in the license directory. This license file should be replaced when it needs to be updated.
3. Follow the remaining installation instructions that are found on pages 3 and 4 of [the GPOPS-II user's guide](#).
4. (Windows only) In your GPOPS-II installation, go to the 'ipopt' folder (GPOPS-II\ipopt). There should be a file called 'ipopt.mexw64'. Replace this file with [the version of 'ipopt.mexw64' in this distribution](#). GPOPS-II will not work with the required versions of Matlab on Windows without this change.
5. (Mac only) If necessary, remove the quarantine attribute from the ipopt MEX file using the following steps:
  - Open a Terminal window.
  - Change directories to the ipopt folder within the GPOPS-II-Distribution folder.
  - Run the following command: `xattr -d com.apple.quarantine ipopt.mexmaci64`

### NMSM Pipeline

Download the [NMSM Pipeline files](#).

Select "Download Latest Releases" -> NMSM Pipeline: nmsm\_core.zip

Unzip the files to a desired location.

In Matlab, navigate to the folder where you installed nmsm-core.

Double-click on the project file Project.prj to set up your environment. **Note that you will have to double-click on this file every time you close and re-open Matlab if you want to continue using the NMSM Pipeline.**

We recommend running the [NMSM Tutorials available with the NMSM Pipeline](#) first to make sure your installation works correctly and to review how tools are used.